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ANNUAL MANUAL
Beverage Industry

1. MANUAL OF STATISTICS

Liquid consumption trends 13
Soft drink sales trends 23
Beer sales trends 49
Bottled water sales trends 62
Wine sales trends 71
Primary packaging trends 75
Secondary packaging trends 85
Vending sales trends 91
Fountain sales trends 103
Expansion plans 106
Restrictive packaging laws 111
Machinery trends 115
Trucks/distribution trends 122
Powdered beverage sales trends 138
Ingredient report: sweeteners 143

BI's Annual Manual in three parts

1. **Manual** — This section contains a review of what happened in the major segments of the beverage industry during the year. It includes charts and graphs detailing size of the industries, volumes, advertising expenditures, etc. The new product section contains a review of the many new products, new packages, services and literature offered to the trade during the year. Reader service numbers for more information make it easy for beverage producers to obtain details on these items which they may have missed when they were first introduced.
2. **Manual** — In charts and graphs, this material is operational in nature and gives the bottler production and formulation details available nowhere else. A directory of industry associations, franchise companies and brand names is also offered.
3. **Buyers' Guide** — Here the reader finds the industry's most complete directory of products and services. Complete addresses with telephone numbers is the concluding section.

ANNUAL MANUAL
Beverage Industry

2. MANUAL OF OPERATIONS

Specifications for producing flavor beverages **194**
Syrup usage **195**
Liquid sugar dilution chart **196**
Carbon dioxide consumption guide **196**
Flavor syrup costs **198**
Carbon dioxide required at various temperatures **200**
Calculating simple syrup costs **202**
Conversion from medium invert to high fructose **204**
Blends of medium invert and HFCS **204**
Trouble shooting guide for carbonated beverages **205**
Sanitation **208**
PET Self-manufacturing guide **210**
Manual directory section
National Soft Drink Association 215
State soft drink associations 217
State supplier/booster associations 222
Allied & Foreign associations 224
United States Brewers Association 229
National Beer Wholesalers Association 230
Major U.S. brewers 231
Leasing importers/distributors of imported beer 232
Franchise companies 234
Franchise bottlers associations 241
Brand names of softdrinks and malt products 243
Manufacturer's representatives 246

3. COMPREHENSIVE BUYER'S GUIDE

Alphabetical listing of suppliers **257**
Index to categories **287**
Product categories **292**

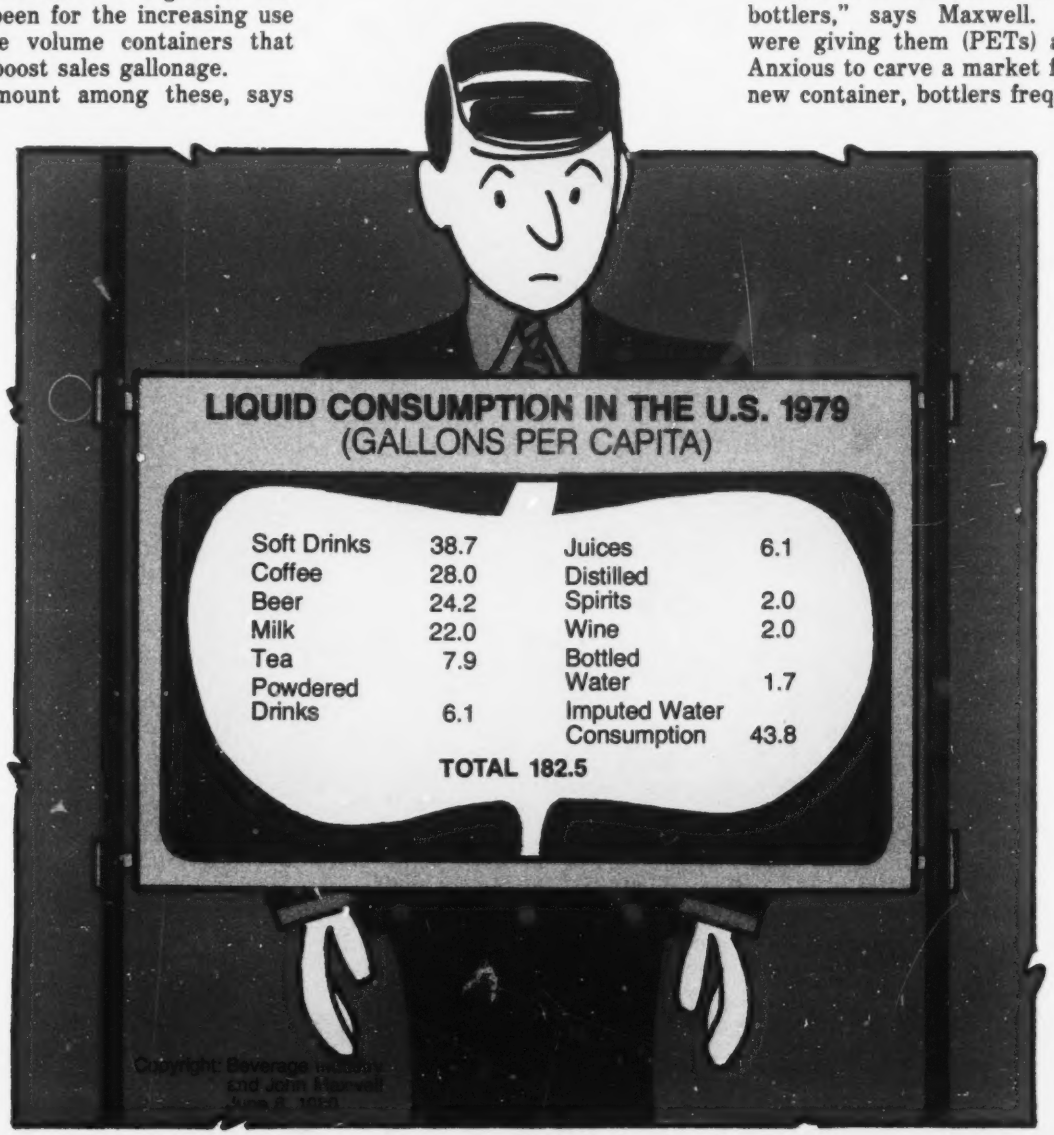
Liquid consumption trends

Soft drinks slow, still lead

1979's 2.3% increase in soft drink consumption can hardly be called disappointing, but according to **Beverage Industry** Research/Statistics Director John C. Maxwell, the 1979 per capita consumption figure of 38.7 gallons could have been as much as 1% greater had it not been for the increasing use of large volume containers that fail to boost sales gallonage.

Paramount among these, says Maxwell, is the 2-L PET (polyethylene terephthalate) bottle. "A lot of people aren't aware of problems with the bottle," he explains. Although the container, relatively new to the industry, offers consumers a hefty 67.2 ounces, the volume is still less than the high-volume packages that preceded it, like the six-pack of 16-oz. bottles (96 ounces total) or the six-pack of cans (72 ounces). Yet, those are the packages losing ground to the plastic bottles.

"Part of it was the fault of the bottlers," says Maxwell. "They were giving them (PETs) away." Anxious to carve a market for the new container, bottlers frequently



offered the bottle at low introductory prices. With the PETs selling for as little as 59 cents on occasion, there was a very strong inducement for the budget conscious housewife to bypass the more familiar — and larger-volume — packages.

Maxwell believes the low price of the 2-L package was also partly responsible for the drop in per capita powdered drink consumption from 6.3 gallons in '78 to 6.1 gallons last year. "It was part of the problem with the 2-L PET," he explains. "If you can get the real thing for 59 cents, why not get it rather than the mix?"

However, a knowledgeable industry source points out that the low introductory price was a necessary step, even if it did temporarily retard sales volume.

"What they (bottlers) did was create a need in the marketplace and establish an acceptance on the part of consumers." Now that

Estimated tea sales trends

(million pounds)

	1977		1978		1979	
	Amount	% of total	Amount	% of total	Amount	% of total
Iced tea	126.18	79.4%	125.11	80.6%	125.36	81.4%
Hot tea	32.82	20.6	30.09	19.4	28.64	18.6
Total	159.00	100.0%	155.20	100.0%	154.00	100.0%

Copyright: Beverage Industry and John C. Maxwell June 6, 1980

Estimated wine consumption

(gallons per capita)

	1976	1977	Change	1978	Change	1979	Change
Domestic	1.479	1.534	1.9%	1.557	1.5%	1.588	2.0%
Imported	0.274	0.318	24.8	0.432	35.8	0.416	(3.7)
Total	1.753	1.852	5.5	1.989	7.4	2.004	0.8

Copyright: Beverage Industry and John C. Maxwell June 6, 1980

Liquid consumption trends in the U.S., 1963-79

(gallons per capita per year)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979E
Soft drinks	25.9	27.0	28.8	30.3	31.7	31.7	31.4	34.1	36.5	37.8	38.7
Coffee*	36.2	35.7	35.3	35.2	35.1	33.8	33.0	29.9	28.1	27.1	28.0
Milk#	25.3	23.1	23.0	23.2	22.9	22.2	22.6	22.4	22.2	22.0	22.0
Beer	17.8	18.5	19.0	19.4	20.2	21.1	21.6	21.9	22.7	23.2	24.2
Tea	6.6	6.9	7.1	7.2	7.6	7.5	7.5	7.4	8.2	7.8	7.9
Powdered drinks	NA	NA	NA	NA	NA	NA	4.9	5.6	6.0	6.3	6.1
Juices	4.7	5.2	5.3	5.4	5.7	6.0	6.4	6.4	6.4	6.1	6.1
Distilled spirits	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0
Wine	1.2	1.3	1.5	1.6	1.7	1.7	1.7	1.8	1.9	2.0	2.0
Bottled water	NA	NA	1.1	NA	NA	NA	1.2	1.2	1.3	1.4	1.7
subtotal	119.5	119.5	123.0	124.2	126.8	126.0	132.3	132.7	135.3	135.7	138.7
Imputed water consumption ø	63.0	63.0	59.5	58.3	55.7	56.5	50.3	49.8	47.2	46.8	43.8
Total	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5

*Coffee data is based on a three-year moving average to counterbalance inventory swings, thereby portraying consumption more realistically.
øIncludes all others.
#USDA revisions as of 7/1/79
R = Revised
NA = Not available

Source: USDA; DSI; USSA; American Bottled Water Assn.

Copyright: Beverage Industry and John Maxwell June 6, 1980

the PET has created a demand for itself, bottlers needn't rely so heavily on the cost advantage.

Like the source, Maxwell believes the price of the 2-L package is likely to increase — something which he sees as a very positive development. "As they raise the price, it will likely hurt 2-L sales. But it could increase consumption as a result of a trade-off to cheaper but higher volume packages."

slower growth

Although soft drinks had the highest per capita consumption of any beverages, with a total of 38.7 gallons, the 2.3% increase over the '78 figure represents a continuation of the slowdown in consumption growth that began in mid-decade. After climbing a healthy 8.9% in 1976, consumption increased by only 7% in '77, and then dropped to 3.5% last year. Consumption has gone up,

U.S. population projections

Age group	1980 Number (thou.)	1980 % of total	1985 Number (thou.)	1985 % of total	1990 Number (thou.)	1990 % of total
Under 5 yrs.	16,020	7.2	18,803	8.1	19,437	8.0
5 to 17 yrs.	45,961	20.7	43,490	18.7	45,359	18.6
18 to 24 yrs.	29,482	13.3	27,853	12.0	25,148	10.3
25 to 29 yrs.	18,930	8.5	20,581	8.8	20,169	8.4
30 to 34 yrs.	17,242	7.8	19,278	8.3	20,917	8.6
35 to 39 yrs.	14,033	6.3	17,274	7.4	19,261	7.9
40 to 54 yrs.	34,386	15.5	36,559	15.7	42,642	17.5
55 to 64 yrs.	21,198	9.5	21,737	9.3	20,776	8.5
65 yrs. & over	24,927	11.2	27,305	11.7	29,824	12.2
All ages	222,159	100.0	232,880	100.0	243,513	100.0

Includes Armed Forces abroad.

Source: Standard & Poor, from figures supplied by Department of Commerce

Copyright: Beverage Industry June 6, 1980

1979 Ranking Top Selling Distilled Spirits Brands in U.S.

(Thousands of 9.0 gallon cases)

Rank	Brand	Distiller/ Importer	Category	Three gallon case depletions 1978	1979	Change	Average annual compounded growth rate (nine years) 1970-1979
1	Bacardi	Bacardi Imports	Rum	5,520	6,350	+15%	13%
2	Smirnoff	Heublein	Vodka	5,985	6,020	+ 1%	8%
3	Seagram's 7 Crown	Seagram	Blend	5,650	5,540	- 2%	2%
4	Seagram's VO	Seagram	Canadian	3,620	3,450	- 5%	1%
5	Canadian Club	Hiram Walker	Canadian	3,085	3,035	- 2%	1%
6	Jim Beam	James B. Beam	Bourbon	2,860	2,910	+ 2%	2%
7	Popov	Heublein	Vodka	2,230	2,800	+26%	16%
8	Seagram's Gin	Seagram	Gin	2,350	2,520	+ 6%	11%
9	Gordon's Gin	Renfield	Gin	2,385	2,480	+ 4%	1%
10	J & B Rare	Paddington	Scotch	2,500	2,475	- 1%	1%
11	Windsor Supreme	National	Canadian	2,220	2,250	+ 1%	6%
12	Canadian Mist	Brown-Forman	Canadian	2,110	2,240	+ 6%	16%
13	Jack Daniel's	Brown-Forman	Bourbon	1,895	2,160	+14%	15%
14	Dewar's	Schenley	Scotch	1,845	2,020	+ 9%	4%
15	Gilbey's Gin	National	Gin	1,925	1,875	- 3%	1%
16	Ancient Age	Schenley	Bourbon	1,800	1,725	- 4%	1%
17	Black Velvet	Heublein	Canadian	1,660	1,720	+ 4%	17%
18	Cutty Sark	Buckingham	Scotch	1,760	1,690	- 4%	1%
19	Kessler	Seagram	Blend	1,680	1,600	- 5%	1%
20	Early Times	Brown-Forman	Bourbon	1,685	1,595	- 5%	1%
	Top twenty brands	—	—	54,785	56,455	+ 3%	4%

Source: Impact Databank

Copyright: Beverage Industry March 28, 1980

but clearly at a decelerating rate.

Nevertheless, soft drinks maintained a healthy 10.7 gallon lead over coffee's per capita consumption figure of 28 gallons. Although the latter total is 3.3% higher than the figure for '78, Maxwell points out it still falls below the 1977 tally of 28.1 gallons. Says Maxwell: "We believe that the slight increase in 1979 still reflects a long-term downtrend."

Beer gained ground last year with the sharpest increase in consumption of all beverages. The per capita total jumped 4.3% to 24.2 gallons, just 3.8 gallons behind coffee.

Milk held steady in the number four position despite a lack of growth in per capita consumption. This year, like last, the figure was 22 gallons.

Far back in the pack, tea consumption rose to 7.9 gallons last year. Maxwell points out that "grocery store tea sales declined somewhat for the year," while iced tea continued to expand its share of the tea market as it has since 1977. The consumption of hot tea declined somewhat.

Juices managed to tie with powdered drinks for the number six slot, with the consumption of each registering at 6.1 gallons on a per capita basis. For powdered drinks, that figure represents a 3.1% decline. Juices fared little better with consumption holding steady at the 6.1 gallon mark reached last year.

It is not coincidental, says Maxwell, that distilled spirits and wine failed to evidence any growth during a year that saw a 4.3% increase in per capita consumption of beer. "Beer usually benefits from a slowdown in the economy," he explains. "Hard liquor consumption goes down, wine goes down and beer goes up. It's sort of an oddball thing.

"There's a general trend away from all alcoholic beverages," the analyst continues. "If you look back five, ten years, liquor consumption was growing around 7%. Wine was growing at around 15%." Last year, the per capita consumption of both stagnated at two gallons. Distilled spirits consumption has stayed at that level since 1974; for wine, the total has not changed in two years.

Maxwell attributes the stagnation to a change in consumer lifestyles — something which he believes won't be rectified by big ad campaigns. "Look at Seagrams. Seagrams did a hell of a lot of advertising in the liquor industry, and the industry is still not growing.

"Advertising has no correlation to lifestyles. It's like pushing a string."

However, a closer look at the figures indicates that there is some change going on in the consumption of wine. "Domestic consumption," says Maxwell, "was up 2% for the year, while imported wines reversed their trend of earlier years and dropped 3.7%."

Although a change in consumer lifestyles may have hampered liquor and wine consumption, the shift in tastes has certainly been a major boon to bottled water.

Six years ago, figures on the per capita consumption of bottled water weren't even available. Since then, per capita consumption of that beverage has burgeoned to 1.7 gallons.

projected growth

The prospect of a recession does not discourage Maxwell from predicting a 4-6% increase in soft drink consumption "in the near future". As he explains it, "In 1972 through '74, we had a depression, not a recession. Prior to that, what people spent for food — that includes meals away from home, soft drinks, everything — was about 16.4% of their budget. At the depths of that depression, it was up to 17.5, 17.7, something like that.

Another factor that is likely to play a part in boosting soft drink consumption — and influencing the consumption of bottled water, beer and wine as well — is the increasing number of working wives. According to Maxwell, "Several studies have indicated that the working woman upgrades her purchases and eats out more . . . data from the National Restaurant Assn. shows that a family with a working wife, during an eight-week period, will eat lunch out 15.5 times and dinner away from home 10.9 times, compared to 12.7 and 9.1 times respectively for non-working wife families." If the past is any indication, the increase in the number of meals consumed away from home will undoubtedly have a positive impact on soft drink consumption.

Coffee	86%	11%	46%	63%	48%	74%
Hot tea	38	9	28	35	25	14
Cola	52	21	8	42	36	3
Non-cola carbonated soft drink	27	18	4	30	16	1
Liquid fruit drink	18	11	7	7	7	3
Water	96	70	27	6	14	18

Soft drink sales trends

Pepsi's gain paces 3.6% industry sales growth

According to **Beverage Industry** Director of Research/Statistics John Maxwell, 1979 saw the soft drink industry grow 3.6% to a total of 5.7 billion cases.

Coke, Pepsi and their allied brands dominated what growth there was: without them growth would have been out 0.6%. The two companies continued to expand their combined market share to 58.2% of the market, up from 51.3% ten years ago.

In addition to declining disposable income, Maxwell says industry sales were hurt by rising gas prices, spot fuel shortages during the vacation months and increased popularity of the 2-L PET bottle.

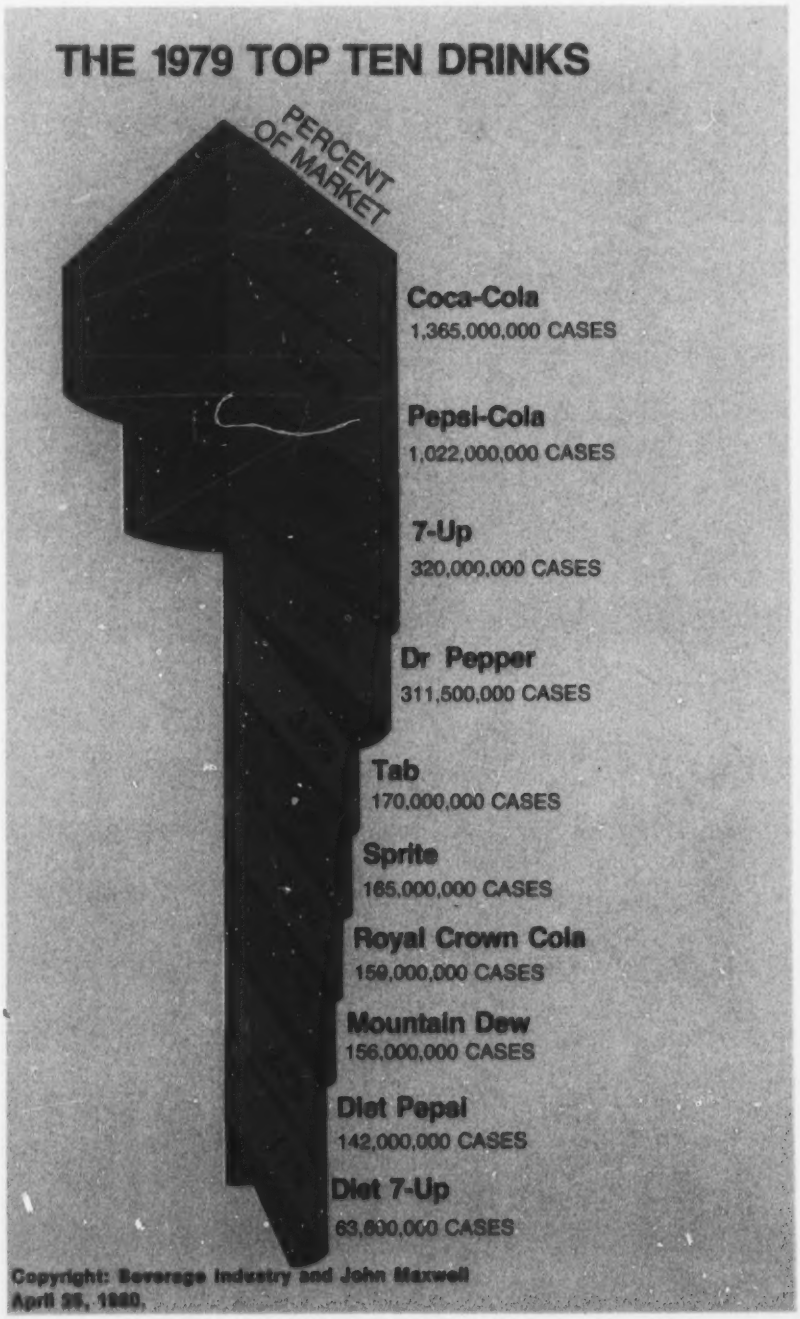
"People don't want to open the bottles if they're going to take just one sip," Maxwell said. "The bottle bought singly takes the place of the larger amount of ounces available in multiple bottle packages and people are making fewer trips to the supermarket."

Maxwell blamed the big bottle for loss of a half point of growth. Even so, the industry had a 9.6% growth rate only four years ago.

Among the top five franchise companies, 7Up and Royal Crown lost volume, down 1.6 million cases and 7.7 million cases, respectively. Shasta, Cott and Dad's also declined in volume. Companies ranked 17 through 27 in Maxwell's statistics were either flat or showed declines, with only two exceptions — Big K (Kroger's private label), up 6.3%, and Barq's, up 46.8%.

Pepsi's progress

The big winner in 1979 was Pepsi. Growth for all brands was double the industry's rate. Brand



Consumption of soft drinks by company

Case = 24 pack, 8 oz. containers; fountain volume included

1974 Mil. Cases	1974 Pct. Market	1975 Mil. Cases	1975 Pct. Market	1976 Mil. Cases	1976 Pct. Market	1977 Mil. Cases	1977 Pct. Market	1978 Mil. Cases	1978 Pct. Market		1979 Mil. Cases	1979 Pct. Market	1978-79 Change
										Coca-Cola Company			
1,088.0	24.4%	1,077.0	24.2%	1,190.0	24.3%	1,290.0	24.5%	1,335.0	24.3%	Coca-Cola	1,365.0	23.9%	2.2%
100.0	2.2	110.0	2.5	130.0	2.7	150.0	2.8	158.0	2.9	Sprite	165.0	2.9	4.4
96.0	2.2	111.0	2.5	125.0	2.6	137.0	2.6	149.0	2.7	Tab	170.0	3.0	14.1
99.0	2.2	93.0	2.1	112.0	2.3	119.0	2.3	112.0	2.0	Fanta	107.0	1.9	(4.5)
21.0	0.5	35.0	0.8	37.0	0.7	45.0	0.9	46.0	0.8	Mr. Pibb	43.0	0.8	(6.5)
28.0	0.6	26.0	0.6	31.0	0.6	28.0	0.5	27.0	0.5	Fresca	25.0	0.4	(7.4)
—	—	—	—	—	—	—	—	—	—	Mellow Yellow	38.0	0.7	—
—	—	5.0	0.1	10.0	0.2	15.0	0.3	19.0	0.4	Others	23.0	0.4	21.1
1,432.0	**32.1**	**1,457.0**	**32.7**	**1,635.0**	**33.4**	**1,784.0**	**33.9**	**1,846.0**	**33.6**	**Total**	**1,936.0**	**34.0**	**4.9**
										PepsiCo, Inc.			
780.0	17.5	775.0	17.4	830.0	17.0	903.0	17.2	969.0	17.6	Pepsi-Cola	1,022.0	17.9	5.5
47.0	1.1	51.0	1.1	73.0	1.5	100.0	1.9	130.0	2.4	Mountain Dew	156.0	2.8	20.0
68.0	1.5	70.0	1.6	90.0	1.9	109.0	2.1	127.0	2.3	Diet Pepsi	142.0	2.5	11.8
—	—	2.0	0.1	25.0	0.5	27.0	0.5	22.0	0.4	Pepsi Light	24.0	0.4	9.1
14.0	0.3	13.5	0.3	12.1	0.2	12.6	0.2	14.0	0.3	Teem	15.0	0.3	7.1
15.8	0.3	14.5	0.3	15.3	0.3	20.3	0.4	19.0	0.3	Others	18.0	0.3	(5.3)
924.8	**20.7**	**926.0**	**20.8**	**1,045.4**	**21.4**	**1,171.9**	**22.3**	**1,281.0**	**23.3**	**Total**	**1,377.0**	**24.2**	**7.5**
										Seven-Up Company*			
311.3	7.0	295.5	6.6	305.8	6.3	315.0	6.0	322.0	5.9	7-Up	320.0	5.6	(0.6)
27.3	0.6	43.6	1.0	60.0	1.2	62.3	1.2	63.0	1.1	Diet 7-Up	63.6	1.1	1.0
9.0	0.2	9.2	0.2	10.0	0.2	10.5	0.2	10.2	0.2	Dixie Cola	10.0	0.2	(2.0)
1.5	—	1.4	—	1.3	—	1.2	—	1.0	—	Howdy Flavors	1.0	—	—
349.1	**7.8**	**349.7**	**7.8**	**377.1**	**7.7**	**389.0**	**7.4**	**396.2**	**7.2**	**Total**	**394.6**	**6.9**	**(0.4)**
										Dr Pepper Company			
216.0	4.8	217.0	4.9	243.0	5.0	278.0	5.3	299.5	5.4	Dr Pepper	311.5	5.5	4.0
18.0	0.4	28.0	0.6	39.0	0.8	52.0	1.0	60.5	1.1	Sugar Free Dr Pepper	62.9	1.1	4.0
234.0	**5.2**	**245.0**	**5.5**	**282.0**	**5.8**	**330.0**	**6.3**	**360.0**	**6.5**	**Total**	**374.4**	**6.6**	**4.0**
										Royal Crown Companies			
150.0	3.4	153.0	3.4	162.2	3.3	168.0	3.2	164.0	3.0	Royal Crown	159.0	2.8	(3.0)
34.0	0.8	36.0	0.8	40.6	0.8	40.6	0.8	40.2	0.7	Diet Rite Cola	38.0	0.7	(5.5)
56.0	1.2	51.0	1.2	55.6	1.2	53.0	1.0	53.5	1.0	Nehi and Others	53.0	0.9	(0.9)
240.0	**5.4**	**240.0**	**5.4**	**258.4**	**5.3**	**261.6**	**5.0**	**257.7**	**4.7**	**Total**	**250.0**	**4.4**	**(3.0)**
										Crush International			
127.1	2.8	131.3	2.9	147.1	3.0	161.8	3.1	181.0	3.3	Hires, Crush, etc.	192.0	3.4	6.1
16.1	0.4	17.1	0.4	20.5	0.4	25.0	0.5	27.0	0.5	Sun Drop	28.0	0.5	3.7
143.2	**3.2**	**148.4**	**3.3**	**167.6**	**3.4**	**186.8**	**3.6**	**208.0**	**3.8**	**Total**	**220.0**	**3.9**	**5.8**
										Canada Dry Corp.†			
50.4	1.1	50.0	1.1	52.4	1.1	52.7	1.0	55.0	1.0	Ginger Ale	56.7	0.9	3.1
18.9	0.4	21.6	0.5	25.2	0.5	25.2	0.5	25.0	0.5	Tonic, Bitter Lemon	26.5	0.5	6.0
20.5	0.5	20.0	0.5	19.0	0.4	19.0	0.4	18.0	0.3	Club soda	20.7	0.4	15.0
—	—	—	—	—	—	15.0	0.3	15.0	0.3	Barrelhead	15.5	0.3	3.3
7.5	0.2	6.0	0.1	5.5	0.1	5.5	0.1	5.5	0.1	Wink	5.0	0.1	(9.1)
54.0	1.2	48.0	1.1	45.0	0.9	42.5	0.8	40.0	0.7	Others	38.0	0.7	5.0
151.3	**3.4**	**145.**	**3.3**	**147.1**	**3.0**	**159.9**	**3.1**	**158.5**	**2.9**	**Total**	**162.4**	**2.9**	**2.5**

*Subsidiary of Philip Morris Inc. as of June 1978.

†Subsidiary of Norton Simon, Inc.

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April 21, 1980

Consumption of soft drinks by company

Case = 24 pack, 8 oz. containers; fountain volume included

1974 Mil. Cases	1974 Pct. Market	1975 Mil. Cases	1975 Pct. Market	1976 Mil. Cases	1976 Pct. Market	1977 Mil. Cases	1977 Pct. Market	1978 Mil. Cases	1978 Pct. Market		1979 Mil. Cases	1979 Pct. Market	1978-79 Change
										Moxie Incorporated			
										Monarch Company			
20.0	0.4	20.0	0.5	21.8	0.4	21.9	0.4	23.2	0.4	Nesbitts	19.0	0.3	(18.1)
NA	—	NA	—	NA	—	NA	—	NA	—	Frostie Root Beer	15.0	0.3	—
12.2	0.3	12.0	0.3	12.8	0.3	13.8	0.3	15.1	0.3	NuGrape	14.3	0.2	(5.3)
8.0	0.2	7.0	0.2	7.2	0.2	8.3	0.2	9.3	0.2	Sun Crest Orange	8.9	0.2	(4.3)
1.7	—	1.7	—	1.8	—	2.0	—	2.2	—	Moxie	2.2	—	—
NA	—	NA	—	NA	—	0.6	—	1.0	—	Kickapoo Joy Juice	0.7	—	(30.0)
1.7	—	2.3	—	4.0	0.1	4.2	0.1	4.3	0.1	Mason's Root Beer	3.9	0.1	(9.3)
3.2	0.1	2.2	—	2.0	—	2.2	—	2.5	—	Flavette	2.1	—	(16.0)
NA	—	—	—	0.7	—	0.8	—	2.4	—	Dr. Wells	2.0	—	(16.7)
23.5	0.5	2.5	0.1	22.6	0.5	24.6	0.5	26.9	0.5	Other	31.9	0.6	18.6
70.3	**1.6**	**47.7**	**1.1**	**72.9**	**1.5**	**78.4**	**1.5**	**86.9**	**1.5**	**Total**	**100.0**	**1.7**	**15.1**
										Consolidated Chocolate Co.			
—	—	—	—	—	—	2.1	—	2.4	—	Chocolate Soldier	2.6	0.1	8.3
—	—	—	—	—	—	1.0	—	1.3	—	Brownie	1.4	—	7.7
—	—	—	—	—	—	1.3	—	1.8	—	Choc-ola	1.9	—	5.6
—	—	—	—	—	—	4.0	0.1	4.5	0.1	Other	4.7	0.1	4.4
7.0	**0.2**	**6.5**	**0.1**	**6.7**	**0.1**	**8.4**	**0.1**	**10.0**	**0.2**	**Total**	**10.6**	**0.2**	**6.0**
77.3	**1.8**	**54.2**	**1.2**	**79.6**	**1.6**	**86.8**	**1.6**	**96.9**	**1.7**	**Grand Total**	**110.6**	**1.9**	**14.1**
										*Acquired December 31, 1979.			
96.5	2.2	93.6	2.1	95.0	1.9	103.1	2.0	106.5	1.9	**Shasta Beverages#**	100.0	1.7	(6.1)
										#Division of Consolidated Foods Corp.			
65.0	1.5	66.0	1.5	67.0	1.4	65.0	1.2	60.0	1.1	**Cott Corporation**	57.0	1.0	(5.0)
20.8	0.5	23.6	0.5	28.4	0.6	35.5	0.7	43.0	0.8	**Cadbury Schweppes USA, Inc.**	55.8	1.0	29.8
										Dad's Root Beer Company			
31.1	0.7	31.3	0.7	32.0	0.6	33.0	0.6	34.0	0.6	Dad's Root Beer	33.5	0.6	(1.5)
10.6	0.2	12.4	0.3	15.0	0.3	15.0	0.3	17.0	0.3	Bubble Up	16.0	0.3	(5.9)
7.1	0.2	7.2	0.2	7.2	0.2	7.2	0.1	7.0	0.1	Diet Dad's	6.5	0.1	(7.1)
48.8	**1.1**	**50.9**	**1.2**	**54.2**	**1.1**	**55.2**	**1.0**	**58.0**	**1.0**	**Total**	**55.5**	**1.0**	**(4.3)**
20.0	0.5	22.7	0.5	29.5	0.6	40.0	0.8	46.3	0.8	**A & W Beverages**	54.0	0.9	16.9
										†Subsidiary of United Brands Company			
32.0	0.7	34.0	0.8	36.4	0.7	37.0	0.7	40.0	0.7	**Squirt Company**	47.6	0.8	19.0
25.7	0.6	27.2	0.6	31.3	0.6	33.5	0.6	35.8	0.7	**Double Cola Co.**	39.1	0.7	9.2
2.5	0.1	5.0	0.1	9.0	0.2	18.0	0.3	31.0	0.6	**Welch's (Welch Foods)**	31.0	0.5	—
27.6	0.6	27.6	0.6	27.9	0.6	28.4	0.5	29.0	0.6	**Frank's Beverages**	29.0	0.5	—
24.2	0.4	21.1	0.5	22.3	0.4	27.3	0.5	26.1	0.5	**Faygo**	23.9	0.4	(8.4)
23.9	0.5	22.7	0.5	23.8	0.5	22.4	0.4	22.4	0.4	**No-Cal**	22.4	0.4	—
21.9	0.5	16.5	0.4	13.5	0.3	14.4	0.3	16.0	0.3	**Big K (Kroger)**	17.0	0.3	6.3
20.4	0.5	15.5	0.3	12.8	0.3	12.5	0.2	12.5	0.2	**Cragmont (Safeway)**	12.5	0.2	—
NA	—	NA	—	NA	—	NA	—	7.9	0.1	**Barg's**	11.6	0.2	46.8
12.3	0.3	13.9	0.2	12.8	0.2	13.3	0.2	12.0	0.2	**Chek (Winn-Dixie)**	11.0	0.2	(8.3)
9.0	0.2	9.0	0.2	10.0	0.2	10.0	0.2	11.0	0.2	**Yoo Hoo**	11.0	0.2	—
8.0	0.2	6.6	0.1	7.2	0.1	8.2	0.2	8.5	0.2	**Cotton Club**	8.0	0.1	(5.9)
10.9	0.2	8.3	0.2	7.0	0.1	6.5	0.1	5.9	0.1	**Yukon (A&P)**	5.5	0.1	(6.8)
4,021.2	**90.2**	**4,030.1**	**90.4**	**4,467.5**	**91.4**	**4,900.3**	**93.2**	**5,176.1**	**94.1**	**Total**	**5,416.9**	**95.0**	**4.7**
438.8	9.8	429.9	9.6	422.5	8.6	358.7	6.8	323.9	5.9	Others	283.1	5.0	(12.6)
4,460.0	**100.0%**	**4,460.0**	**100.0%**	**4,890.0**	**100.0%**	**5,259.0**	**100.0%**	**5,500.0**	**100.0%**	**Grand Total**	**5,700.0**	**100.0%**	**3.6**

Pepsi-Cola's 5.5% growth was two and one-half times that of brand Coke's 2.2%.

Mountain Dew slowed from 1978's 30% growth clip, but continued to make marketing inroads at a 20% speed. Pepsi Light was able to reverse a decline of nearly 20% the previous year and moved an additional two million cases for a 9.1% increase.

In a year in which 7Up spent heavily and lost volume, while the lemon-lime category barely grew, Pepsi's entry, Teem, scored a 7.1% gain.

PepsiCo's only decline was in its smaller brands: Patio flavors and new products On-Tap root beer and Aspen apple flavored soft drink.

The year's sales figures show a narrowing of most market share battles between individual top ten brands. Brand Coke gained 2.2%, but dropped 0.4% in market share to 23.9%, while hard charging brand Pepsi outgrew the industry at a 5.5% clip to boost its market share to 17.9%.

Number three 7Up continued a decline begun before it was purchased by Philip Morris, losing two million cases and 0.3% in market share to drop to 5.6%. "Philip Morris is just getting its act together," Maxwell said. "It took four to five years before Miller got going and it will take at least as much time to build 7Up in the right direction. In the case of soft drinks, you've got much more knowledgeable and aggressive competition than Philip Morris had in the beer industry. It's harder row to hoe."

Although Dr Pepper's growth slowed, it still managed to add 12

The top ten drinks

1975			1976			1977			1978				1979		
Mil. Cases	Pct. Market	Pct. Change	Mil. Cases	Pct. Market	Pct. Change	Mil. Cases	Pct. Market	Pct. Change	Mil. Cases	Pct. Market	Pct. Change		Mil. Cases	Pct. Market	Pct. Change
1,077.0	24.2	1.0	1,190.0	24.3	10.5	1,290.0	24.5	8.4	1,335.0	24.3	3.5	Coca-Cola	1,365.0	23.9	2.2
775.0	17.4	(0.6)	830.0	17.0	7.1	903.0	17.2	8.8	969.0	17.6	7.3	Pepsi-Cola	1,022.0	17.9	5.5
295.5	6.6	(5.1)	305.8	6.3	3.5	315.0	6.0	3.0	322.0	5.9	2.2	Seven-Up	320.0	5.6	(0.6)
217.0	4.9	0.5	243.0	5.0	12.0	278.0	5.3	14.4	299.5	5.4	7.7	Dr Pepper	311.5	5.5	4.0
111.0	2.5	15.6	125.0	2.6	12.6	137.0	2.6	9.6	149.0	2.7	8.8	Tab	170.0	3.0	14.1
110.0	2.5	10.0	130.0	2.7	18.2	150.0	2.8	15.4	158.0	2.9	5.3	Sprite	165.0	2.9	4.4
153.0	3.4	2.0	162.2	3.3	6.0	168.0	3.2	3.6	164.0	3.0	(2.4)	Royal Crown Cola	159.0	2.8	(3.0)
51.0	1.1	8.5	73.0	1.5	43.1	100.0	1.9	37.0	130.0	2.4	30.0	Mountain Dew	156.0	2.7	20.0
70.0	1.6	2.9	90.0	1.9	28.6	109.0	2.1	21.1	127.0	2.3	16.5	Diet Pepsi	142.0	2.5	11.8
43.6	1.0	59.7	60.0	1.2	37.6	62.3	1.2	3.8	63.0	1.1	1.1	Diet 7-Up	63.6	1.1	1.0

Cola consumption*

1975			1976			1977			1978				1979		
Mil. Cases	Pct. Total	Pct. Change	Mil. Cases	Pct. Total	Pct. Change	Mil. Cases	Pct. Total	Pct. Change	Mil. Cases	Pct. Total	Pct. Change	Company	Mil. Cases	Pct. Total	Pct. Change
1,188.0	42.9	0.3	1,315.0	43.2	10.7	1,427.0	43.5	8.5	1,484.0	43.3	4.0	Coca-Cola	1,535.0	43.2	3.4
847.0	30.6	0.1	945.0	31.1	11.6	1,039.0	31.7	9.9	1,116.0	32.6	7.6	PepsiCo	1,188.0	33.5	6.3
189.0	6.8	2.7	202.8	6.7	7.3	208.6	6.4	2.9	204.2	6.0	(2.1)	Royal Crown	197.0	5.5	(3.5)
2,224.0	80.3	0.4	2,462.8	81.0	10.7	2,674.8	81.6	8.6	2,806.2	81.9	4.9	Subtotal	2,920.0	82.2	4.1
546.0	19.7	1.9	577.2	19.0	5.7	605.4	18.4	4.9	620.8	18.1	2.5	All Others	631.0	17.8	1.6
2,770.0	100.0	0.7	3,040.0	100.0	9.7	3,280.0	100.0	7.9	3,427.0	100.0	4.5	Total	3,551.0	100.0	3.6

Diet soft drink consumption*

1975			1976			1977			1978				1979		
Mil. Cases	Pct. Total	Pct. Change	Mil. Cases	Pct. Total	Pct. Change	Mil. Cases	Pct. Total	Pct. Change	Mil. Cases	Pct. Total	Pct. Change		Mil. Cases	Pct. Total	Pct. Change
137.0	32.1	10.5	156.0	29.5	13.9	165.0	27.9	5.8	176.0	27.9	6.7	Coca-Cola*	195.0	28.9	10.8
70.0	16.4	2.9	90.0	17.0	28.6	109.0	18.5	21.1	127.0	20.2	16.5	Pepsi-Cola	142.0	21.1	11.8
43.6	10.2	59.7	60.0	11.3	37.6	62.3	10.6	3.8	63.0	10.0	1.1	Seven-Up	63.6	9.4	1.0
28.0	6.6	55.6	39.0	7.4	39.3	52.0	8.8	33.3	60.5	9.6	16.3	Dr Pepper	62.9	9.3	4.0
36.0	8.4	5.9	40.6	7.7	12.8	40.6	6.9	—	40.2	6.4	1.0	Royal Crown Cola	38.0	5.7	(7.1)
7.2	1.7	1.4	7.2	1.4	—	7.2	1.2	—	7.0	1.1	(2.8)	Dad's	6.5	1.0	(7.1)
321.8	75.4	15.6	392.8	74.3	22.1	436.1	73.9	11.0	473.7	75.2	8.6	Subtotal	508.0	75.4	7.2
105.2	24.6	14.8	136.2	25.7	29.5	153.9	26.1	13.0	156.3	24.8	1.6	All Others	166.0	24.6	6.2
427.0	100.0	16.8	529.0	100.0	23.9	590.0	100.0	11.5	630.0	100.0	6.8	Total	674.0	100.0	7.0

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million cases and 0.1% to its market share. It is now less than 10 million cases away from 7Up. Although the 4% increase in volume is somewhat slower than previous years' advances, Maxwell thinks it only a temporary breather.

"They'll start going again," the analyst said. "The company feels their bottlers weren't working hard enough. They've had some meetings and they think they've convinced their bottlers to spend more time on the product than they had. It could be in third position next year."

A market researcher at Dr Pepper projects growth in 1980 to be 6% or 7%, or two to three times industry growth. Claiming 7Up's sales decline to be steeper than Maxwell's figures, the analyst said, "as far as third place, we're either there or a box of concentrate behind."

In sugar-free, Dr Pepper is even closer: a scant 700,000 cases separate the two, according to Maxwell.

closing the gaps

There was some shifting and a general tightening among brands in the five through nine slots of the top ten: Tab led a 7% increase in the diet category by more than doubling the category's growth and adding 0.3% to its market share. Its 170 million case total enabled it to jump both RC and Sprite and land in the fifth position. Sprite also overtook troubled RC but remained in sixth position, dropping RC from fifth to seventh. Mountain Dew and Diet Pepsi continued to hold down the eight and nine spots but notched impressive 20% and 11.8% gains. Last year, 37 million cases separated the fifth best seller from the ninth, this year, number five Tab outsells number nine Diet Pepsi by only 28 million cases.

cola unchanged

Market share by flavor type saw some changes, but not in rank. Cola remained unchanged at 62.3%, but lemon-lime lost 0.2% to 12.1%, a decline picked up by the Pepper-types which now own 7.9%.

Category leader Dr Pepper accomplished the expansion singlehandedly since both Mr. Pibb and Dr. Wells experienced declines. Although Coke is rumored to be reworking Mr. Pibb's formula and packaging, a Dr Pepper spokesman was unconcerned.

Root beer picked up orange's 0.1% decline as orange slumped to 7.3%; root beer continued its steady climb to 5.5%, providing 7Up with another reason for purchasing its hometown bottler, Taylor Beverages, which owned a root beer brand, I.B.C.

Root beer growth was dominated near-national by A&W (16.9%) and newcomer and flashy dresser Barq's (46.8%). The two

	Million cases consumed	Gallons per capita
1979	5,700.0	38.7
1978	5,500.0	37.8
1977	5,260.0	36.5
1976	4,890.0	34.1
1975	4,460.0	31.4
1974	4,460.0	31.7
1973	4,440.0	31.7
1972	4,200.0	30.3
1971	3,950.0	28.8
1970	3,675.0	27.0
1969	3,475.0	25.9
1968	3,300.0	24.9
1967	3,100.0	23.6
1966	2,910.0	22.3
1965	2,625.0	20.4
1964	2,430.0	19.1
1963	2,245.0	17.9

Estimated market share by type*

1971	1972	1973	1974	1975	1976	1977	1978		1979
63.0%	63.0%	62.5%	61.7%	62.1%	62.2%	62.4%	62.3%	Cola	62.3%
12.0	12.0	12.5	12.8	12.9	12.7	12.4	12.3	Lemon-Lime	12.1
3.9	4.6	5.0	5.2	5.3	6.7	7.3	7.7	Pepper Type	7.9
8.4	8.4	8.2	8.0	7.9	7.8	7.4	7.4	Orange	7.3
5.0	5.0	5.0	5.2	5.2	5.2	5.3	5.4	Root Beer	5.5
7.7	7.0	6.8	7.1	6.6	5.4	5.2	4.9	All Others	4.9
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	Total	100.0%

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NSDA production and consumption of soft drinks

Year	Total Value $ (Wholesale)	Total Cases (288 ounce)	Per capita (12 oz. containers)
1849	760,000	1,013,300	1.1
1859	1,415,000	1,886,700	1.5
1869	4,222,000	5,629,300	4.3
1879	4,742,000	6,322,700	3.0
1889	14,354,000	17,398,800	6.6
1899	23,269,000	25,854,450	8.1
1909	43,508,000	41,436,200	10.8
1919	135,341,000	112,784,100	25.6
1929	214,322,238	181,618,990	35.4
1939	361,690,917	321,997,120	59.1
1945	584,994,000	487,495,000	88.6
1949	860,959,300	675,262,200	108.0
1950	876,532,600	667,834,300	105.3
1951	939,442,500	695,883,300	108.5
1952	1,019,295,000	755,033,300	116.0
1953	1,089,513,000	785,234,700	118.3
1954	1,166,605,000	784,449,300	116.1
1955	1,252,276,000	843,283,300	122.8
1956	1,308,000,000	880,809,300	125.9
1957	1,347,241,500	907,233,300	126.1
1958	1,427,463,500	906,326,000	124.3
1959	1,633,015,900	989,706,700	133.2
1960	1,698,025,600	984,362,700	128.0
1961	1,829,083,200	1,016,157,300	132.2
1962	2,001,016,800	1,111,676,000	142.3
1963	2,341,189,000	1,200,601,000	151.6
1964	2,533,167,000	1,299,060,000	161.9
1965	2,735,567,000	1,402,854,700	172.7
1966	3,175,980,000	1,568,391,300	191.3
1967	3,458,632,000	1,646,968,000	198.7
1968	4,165,552,000	1,851,356,700	221.1
1969	4,369,664,000	1,942,073,300	229.6
1970	4,799,784,000	2,064,423,300	241.9
1971	5,346,960,000	2,235,743,300	258.7
1972	5,683,820,000	2,360,944,700	270.9
1973	6,223,156,500	2,514,406,700	286.4
1974	7,827,131,000	2,532,007,300	286.3
1975	9,397,797,600	2,610,499,300	292.7
1976	10,375,167,000	2,952,474,700	328.7
1977	11,526,810,000	3,247,722,000	359.0
1978	13,344,588,000	3,490,000,000	382.7
1979	**14,872,628,000**	**3,664,300,000**	**399.6**

Note: 1978 Resident Population 218,858,000 U.S. Department of Commerce, Bureau of the Census. For purposes of the report, all soft drink sales are converted to gallons and expressed in cases of 24 twelve ounce containers. Prior to 1977 the standard case was 24 eight ounce containers. This change has been made to more accurately reflect the average size container.

combined to add 11.5 million cases to the category which was offset by losses such as the one million case decline suffered by Dad's. Maxwell points out that a large portion of A&W's sales come from the firm's franchised drive-ins.

Americans drank 44 million more cases of diet drinks last year than the previous year. Most of the increase was in Pepsi and Coke owned colas: Tab added 21 million, Diet Pepsi 15 million and Pepsi Light added two million more for a total of 38 million. Losers included Diet-Rite (down 2.2 million), Fresca (down 2.0 million) and Dad's (down 0.5 million).

Among other brands, Coke's Mello Yello easily walked away with rookie of the year honors. Even with packaging restrictions (fillers must be equipped to hot-sanitize) it ranked fifteenth, tied with Diet-Rite at 38 million cases.

Crush International enjoyed a healthy 6.1% increase from Hires root beer and the Crush flavor line. However, given the volume increases Maxwell credits to A&W and Barq's, Crush's flagship flavors undoubtedly grew even faster to mask a Hires' decline.

1979 U.S. bottling & canning lines*

State	Bottling lines	Canning lines
Alabama	52	8
Alaska	4	1
Arizona	25	6
Arkansas	27	5
California	113	24
Colorado	31	6
Connecticut	38	2
Delaware	5	1
District of Columbia	0	0
Florida	67	14
Georgia	80	4
Hawaii	11	3
Idaho	17	0
Illinois	84	12
Indiana	86	6
Iowa	33	5
Kansas	37	3
Kentucky	50	6
Louisiana	62	7
Maine	21	0
Maryland	37	9
Massachusetts	67	8
Michigan	78	9
Minnesota	56	5
Mississippi	67	3
Missouri	54	5
Montana	22	1
Nebraska	21	5
Nevada	12	0
New Hampshire	11	1
New Jersey	63	10
New Mexico	25	2
New York	165	15
North Carolina	87	2
North Dakota	10	1
Ohio	83	13
Oklahoma	41	4
Oregon	32	1
Pennsylvania	133	14
Rhode Island	15	0
South Carolina	44	1
South Dakota	12	0
Tennessee	63	4
Texas	201	13
Utah	20	1
Vermont	6	0
Virginia	53	5
Washington	33	6
West Virginia	35	1
Wisconsin	85	6
Wyoming	7	1
Total	**2581**	**263**

Estimated by: Beverage Industry.

Copyright: Beverage Industry, Sept. 15, 1980

Sun Drop was flat with the industry.

Sparked by *The New York Times* taste test which ranked it above several highly touted imported mineral waters, Canada Dry's club soda gained 2.7 million cases, one-third of the Norton Simon subsidiary's gains. Tonic and bitter lemon showed healthy gains. Barrelhead root beer, introduced in 1977 with heavy advertising, added a half-million cases to the root beer bulge after 1978's flat sales record. What Barrelhead gave, Wink took away, declining 9.1%.

Moxie's Monarch Co. grew by acquiring Frostie and its line of flavors and generics at the end of 1979. The newly acquired line added four million cases, enough to offset losses in every Monarch Co. brand except for brand Moxie, whose sales were flat. Frostie's 15 million cases provided the only growth.

Ron Swan, advertising coordinator at Monarch, failed to echo the optimism expressed at Dr Pepper headquarters for Pepper-type drinks. "It will continue to grow, but I have to question whether it will continue at the rate of the past four years or so," he said. Nonetheless, he said they are looking at Dr. Wells for ways to turn around its 400,000 case loss.

Moxie's Consolidated Chocolate Co. fared better, gaining 600,000 cases for a total of 10.6 million. With Yoo Hoo's repeat of last year's 11 million case mark, the total chocolate drink market is now at about 22 million cases.

In the tenth position among companies, Shasta barely remained in the 100 million case league. Sales declined 6.1% and market share dropped 0.2. Cott dropped three million cases to 57 million.

Close on Cott's heels is Schweppes, which grew almost 30%, as Rondo expanded its market penetration from 6% to 20% of the population. Although a company spokesman declined to specifically identify growth for Rondo, he said the Schweppes mixer line grew about 10%.

Dad's failed to keep up with last year's pace. Both Dad's and Bubble Up dropped one million

cases, with Dad's and Sugar-Free Dad's splitting the brand's loss 50-50.

Both Squirt and Double-Cola outgrew the market by a considerable margin. Repackaged and reformulated Squirt added 0.1% of market share to post 47.6 million cases in the year. Double-Cola debuted a new marketing and advertising approach and scored a 9.2% increase to 39.1 million cases.

Beverage retail prices, U.S. average, 1967-77*

(cents per specified size)

Year and month	Cola drink, 72-ounces	% Change from previous period	Carbonated fruit drink, 72-ounces	% Change from previous period	Lemonade concentrate, frozen, 6-ounces	% Change from previous period	Fruit drink canned, 46-ounces	% Change from previous period
1967	60.8	NA	57.0	NA	12.3	NA	32.0	NA
1968	65.1	+ 7.1	60.5	+ 6.1	12.4	+ .8	32.2	+ .6
1969	68.9	+ 5.8	63.1	+ 4.3	12.7	+ 2.4	33.8	+ 4.9
1970	72.6	+ 5.4	69.1	+ 9.5	13.2	+ 3.9	35.3	+ 2.9
1971	75.8	+ 4.4	72.6	+ 5.1	13.9	+ 5.3	36.2	+ 2.5
1972	83.3	+ 9.8	73.2	+ .8	14.4	+ 3.6	36.8	+ 1.7
1973	86.1	+ 3.3	75.5	+ 3.1	14.7	+ 2.0	38.0	+ 3.3
1974	108.9	+26.4	93.7	+24.1	17.2	+17.	43.7	+15.0
1975	132.8	+21.9	115.2	+22.9	23.0	+33.7	54.3	+24.0
1976	127.2	- 4.2	116.6	+ 1.2	22.7	- 1.3	55.6	+ 2.4
1977	107.4	-15.6	113.8	- 2.4	23.1	+ 1.8	58.3	+ 4.9

Consumer Price Index*

	Cola drinks (excl. diet)	% Change from previous month	Carbonated drinks (incl. diet)	% Change from previous month	Noncarbonated drinks (excl. coffee)	% Change from previous month	Fruit juices (non-frozen)	% Change from previous month
1978								
January	209.1	NA	101.3	NA	101.2	NA	100.0	NA
February	210.5	+ .67	102.9	+1.6	103.1	+1.9	101.3	+ .02
March	213.6	+1.5	104.1	+1.2	104.2	+1.1	102.2	+ .39
April	216.8	+1.5	106.0	+1.8	105.0	+ .77	103.5	+1.3
May	216.8	0	106.2	+ .19	105.3	+ .29	103.4	+ .001
June	218.6	+ .83	106.9	+ .66	106.3	+ .95	105.0	+1.5
July	219.4	+ .37	107.6	+ .65	106.8	+ .47	105.7	+ .67
August	220.4	+ .46	108.2	+ .56	107.9	+1.)0	105.7	0
September	221.4	+ .45	108.9	+ .65	107.9	0	106.5	+ .76
October	223.4	+ .90	109.1	+ .18	108.5	+ .56	107.0	+ .47
November	224.0	+ .27	109.8	+ .64	108.5	0	108.5	+1.4
December	225.4	+ .63	110.0	+ .18	109.3	+ .74	110.6	+1.9
1979								
January	230.1	2.1	111.6	1.4	111.2	1.7	111.5	1.0
February	233.6	1.5	113.3	1.5	112.1	0.8	112.8	1.2
March	233.8	0.1	115.1	1.6	112.5	0.3	113.3	0.4
April	234.8	0.4	114.5	1.0	113.3	0.1	115.2	1.7
May	237.8	1.3	115.1	0.5	113.5	0.2	115.6	0.5
June	237.9	0.1	115.3	0.2	113.4	-0.1	115.6	NC
July	238.3	0.2	115.6	0.3	113.1	-0.3	117.0	1.2
August	239.2	0.2	116.2	0.5	114.2	0.1	117.9	0.8
September	242.7	1.5	117.9	1.5	114.0	-0.2	119.3	1.2
October	246.4	1.5	118.5	0.5	114.8	0.7	119.8	0.4
November	247.5	0.4	118.4	-0.1	115.7	0.8	122.1	1.9
December	247.2	0.1	118.7	0.3	116.3	0.5	123.6	1.2

*For all urban consumers

Source: Bureau of Labor Statistics

Copyright: Beverage Industry Sept. 15, 1980

U.S. soft drink plants 1935-1978

State	1978	1977	1976	1975	1974	1973	1972	1970	1965	1960	1950	1940	1935
Alabama	42	45	47	52	59	59	66	73	96	109	139	100	93
Alaska	4	4	5	5	6	6	7	7	7	12	—	—	—
Arizona	22	23	23	25	25	23	26	23	32	33	43	30	32
Arkansas	33	32	37	40	46	47	49	53	70	76	120	89	82
California	109	113	117	125	129	132	133	141	183	203	304	243	217
Colorado	25	26	26	32	36	34	34	34	40	48	76	63	48
Connecticut	36	29	37	39	46	47	48	52	63	81	108	118	118
Delaware	5	5	6	6	6	6	7	10	11	13	18	20	10
District of Columbia	0	0	1	1	1	1	1	2	3	5	11	19	21
Florida	58	61	62	68	81	84	88	96	123	142	180	140	132
Georgia	63	71	75	78	82	84	92	98	116	132	199	150	136
Hawaii	9	10	10	13	15	15	14	18	25	26	—	—	—
Idaho	14	15	15	15	14	14	16	17	17	20	30	22	19
Illinois	65	69	70	80	84	96	98	112	172	192	326	366	396
Indiana	51	51	57	64	72	76	76	82	98	112	177	154	151
Iowa	29	28	29	29	29	35	38	42	57	80	136	130	127
Kansas	29	29	28	30	32	33	34	38	49	62	105	95	87
Kentucky	43	45	47	52	53	54	56	62	76	85	126	103	84
Louisiana	43	41	42	46	47	46	45	54	68	75	114	85	73
Maine	17	18	19	20	22	23	25	28	43	51	66	62	58
Maryland	32	35	36	36	38	37	36	36	42	48	80	71	75
Massachusetts	62	63	69	70	73	74	74	85	109	133	222	226	247
Michigan	56	64	64	67	73	77	80	84	99	110	169	150	161
Minnesota	48	49	48	47	52	51	55	60	78	99	134	125	121
Mississippi	40	44	42	46	53	55	57	66	85	96	118	101	81
Missouri	48	51	55	61	65	69	69	77	96	109	190	190	191
Montana	18	19	21	20	21	22	24	25	27	32	37	31	26
Nebraska	26	25	25	26	28	28	30	31	44	54	84	78	78
Nevada	10	10	10	11	10	10	11	11	12	12	16	13	12
New Hampshire	11	11	9	10	12	14	15	15	19	21	35	34	32
New Jersey	39	46	52	55	70	73	74	91	106	139	205	225	229
New Mexico	22	19	22	22	25	25	26	27	31	31	40	33	25
New York	106	116	129	141	153	154	160	171	231	278	433	514	498
North Carolina	78	87	82	85	99	101	102	114	119	131	194	171	141
North Dakota	9	12	11	11	11	12	12	13	17	18	29	24	22
Ohio	75	78	82	84	99	101	104	110	140	172	271	248	293
Oklahoma	38	42	44	44	49	49	51	52	75	90	139	106	95
Oregon	30	27	27	31	31	31	32	35	42	48	68	42	39
Pennsylvania	130	139	150	171	190	193	213	234	302	357	508	534	669
Rhode Island	11	13	13	14	14	16	17	19	27	33	50	52	50
South Carolina	33	43	42	45	50	53	54	63	75	85	116	86	72
South Dakota	10	10	10	10	10	10	10	11	18	23	31	29	29
Tennessee	55	60	60	62	68	72	73	77	92	100	146	113	104
Texas	136	147	148	163	170	174	178	198	244	283	419	375	372
Utah	20	22	21	21	22	24	25	25	29	29	39	30	27
Vermont	6	5	6	6	6	7	7	10	13	14	25	20	22
Virginia	46	49	52	51	53	57	59	65	80	100	136	117	113
Washington	34	34	32	30	31	32	33	35	46	58	85	59	57
West Virginia	36	35	36	37	41	43	45	51	62	72	106	88	72
Wisconsin	73	85	86	92	102	104	108	111	147	169	239	224	230
Wyoming	7	9	9	9	9	9	10	10	12	18	20	20	15
TOTAL		**2174**	**2246**	**2613**	**2692**	**2797**	**3404**	**3054**	**3868**	**4519**	**6662**	**6118**	**6092**

Source: National Soft Drink Association

Soft drink advertising expenditures

Manufacturer and brand:	1978 ($ mil.)	1978 volume (mil. cases)	1979 ($ mil.)	1979 volume (mil. cases)	Change in ad expenditures '78-'79 (%)
Coca-Cola					
Coca-Cola	35.0	1,335.0	41.7	1,365.0	19.1
Sprite	7.9	158.0	9.6	165.0	21.5
Mr. PiBB	1.8	46.0	1.1	43.0	-38.9
Tab	8.6	149.0	12.6	170.0	46.5
Fresca	6.1	27.0	6.3	25.0	3.3
Others	0.3	19.0	2.4	23.0	700.0
Total	**59.7**	**1,846.0**	**73.7**	**1,936.0**	**23.5**
PepsiCo					
Pepsi-Cola	25.7	969.0	35.0	1,022.0	36.2
Diet Pepsi	6.4	127.0	8.7	142.0	35.9
Mountain Dew	6.8	130.0	8.4	156.0	23.5
Pepsi Light	3.7	22.0	6.3	24.0	70.3
Teem	0.5	14.0	0.6	15.0	20.0
Others	0.4	19.0	1.5	18.0	275
Total	**43.5**	**1,281.0**	**60.5**	**1,377.0**	**39.1**
Seven-Up					
7Up	15.6	322.0	24.6	320.0	57.7
Diet 7Up	3.7	63.0	5.7	63.6	54.1
Quirst	1.1	—	1.2	—	9.1
Total	**20.4**	**396.2***	**31.5**	**394.6**	**54.4**
Dr Pepper					
Dr Pepper	10.2	299.5	9.0	311.5	-11.8
Sugar-free Dr Pepper	1.9	60.5	2.8	62.9	47.4
Total	**12.1**	**360.0**	**11.8**	**374.4**	**-2.3**
RC Cola					
RC Cola	7.3	184.0	7.3	88.0	0
Diet-Rite Cola	3.1	40.2	3.8	38.0	[illegible]
Mehl, others	0.8	83.3	0.8	83.0	[illegible]
Total	10.8	307.7	10.8	209.0	0
Crush International					
Hires, Crush, others	1.7	181.3	2.3	182.0	[illegible]
Sun Drop	—	27.0	2.0	28.0	[illegible]
Total	1.7	208.3	4.3	210.0	[illegible]
Seven-Seas					
Canada Dry beverages	3.8	88.0	4.8	102.0	[illegible]
Barrelhead	1.0	15.0	1.0	15.0	[illegible]
Others	0.3	45.0	0.3	45.0	[illegible]
Total	5.0	148.0	6.1	162.4	[illegible]
Dad's Root Beer (IC Industries)					
Dad's Root Beer	1.4	24.0	1.8	30.0	[illegible]
Others	0.8	24.0	1.7	22.0	[illegible]
Total	2.2	48.0	3.5	—	[illegible]
Schweppes	4.1	43.0	5.2	55.8	26.8
A&W Root Beer	4.7	46.2	4.0	54.0	-14.9
SquirtCo	0.6	40.0	0.5	47.6	-16.7
Faygo	0.3	26.1	0.3	23.9	0
Welch's	1.8	31.0	2.3	31.0	27.8
All others	11.7	323.9	13.5	283.1	15.4
Total	**180.5**	**5,500.0**	**224.3**	**5,700.0**	**24.3**

Source: LNA

Copyright: Beverage Industry May 23, 1980

Beer sales trends

Beer sales up in '79 — but at slower rate

As the 1970s came to a close, beer sales continued to climb – but at the slowest rate since 1976.

According to **Beverage Industry's** John C. Maxwell, beer sales in 1979 amounted to 167 million barrels. Although that figure is 37% higher than the 1970 total, it is only 3% higher than the sales volume for 1978. In comparison, beer sales jumped 3.5% between 1977 and 1978, and 4.3% between 1976 and 1977.

Last year's decline in sales growth is a continuation of the drop-off in sales that began in mid-decade. C. James Walker III, an analyst with Shearson, Hayden, Stone, Inc., spoke about the decline at the recent National Beer Wholesalers Assn. convention in Hollywood, FL.

"If you look at the eight years of this decade, 1970 to 1978," he said, "you'll find that total U.S. beer consumption grew at a compounded annual rate of 3.5%. But if you take those eight years and split them in half, you find that, '70 to '74, the growth was 4.8%. In the most recent period, '74 to '78, it slowed to a 2.8% annual rate of growth. There has been very little of what could be considered normalcy in that most recent four year period."

Like the soft drink industry, the beer industry seems to be suffering the effects of an economic downturn. But the nation's brewers also face several problems that members of the soft drink industry are spared.

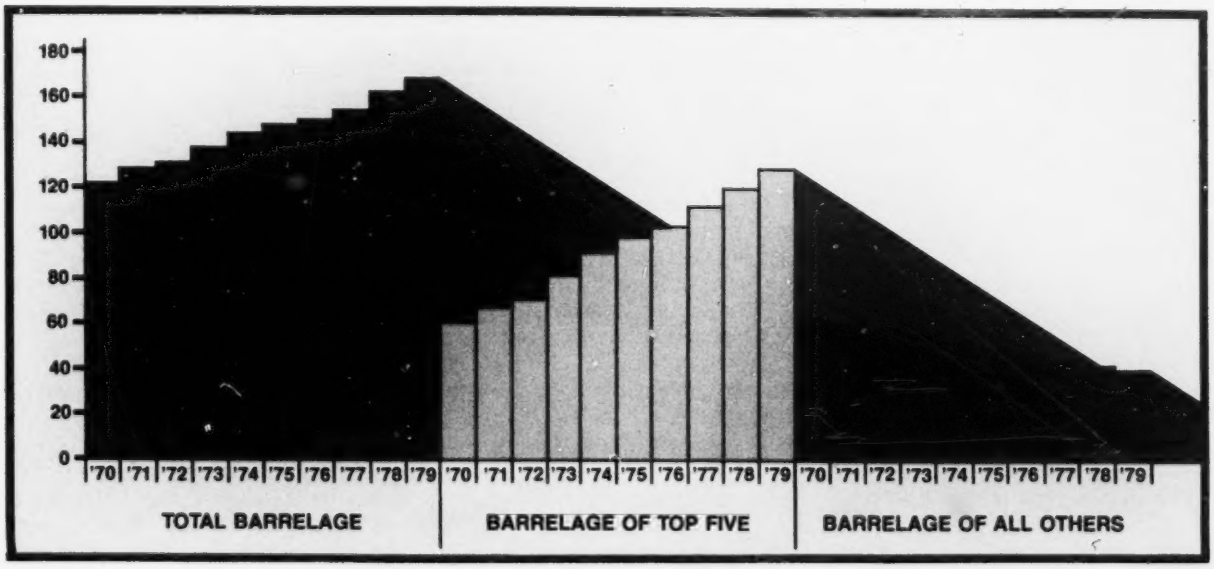
For example, Maxwell points out that the beer business is undergoing a period of rapid concentration, with the number of competitors steadily diminishing. Regional brewers have been particularly susceptible. The trend may very likely have a negative effect on sales since the industry has traditionally tried to associate its brands with certain regions.

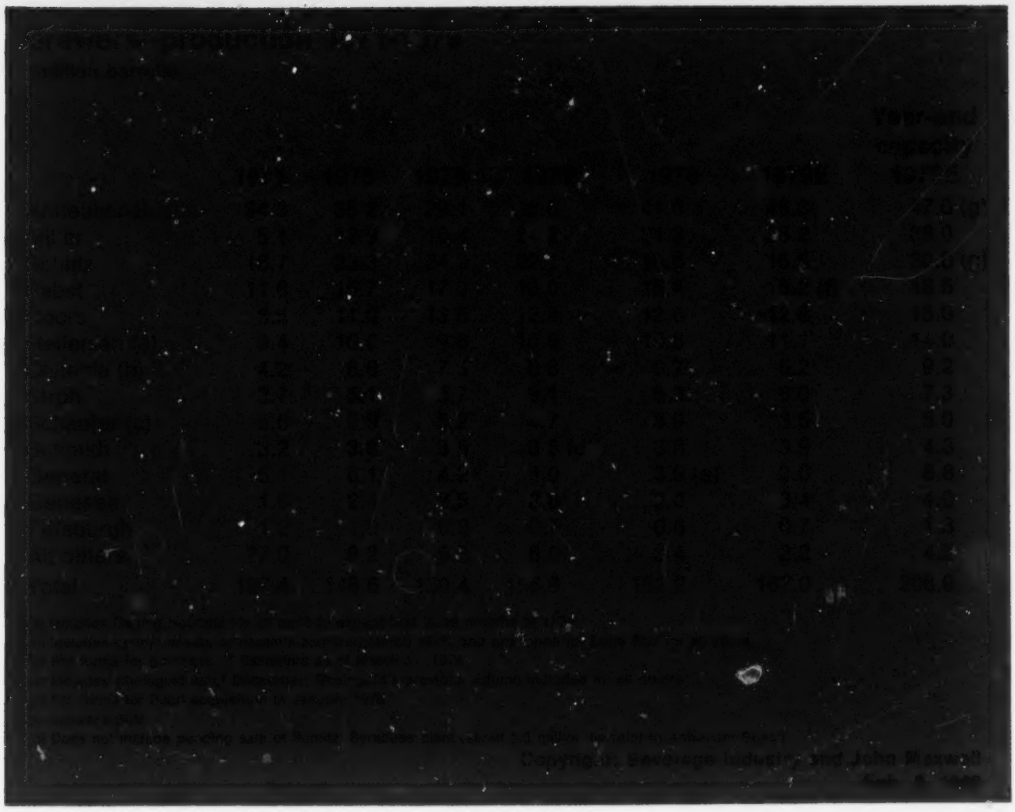
Partner-analyst Arthur Stupay of Prescott, Ball & Turben agrees that the weeding out of regional brewers is not good for the industry. "I'm not convinced we have to have a Coke and Pepsi syndrome in the beer industry," he told **Beverage Industry.** "We could have more diversification."

Miller vs. A-B

That decline in sales, of course, has not affected every brewer; if there was one consistent trend in the 70s, it was the steady rise of the Miller Brewing Co. In the past decade, the Philip Morris subsidiary has jumped from the industry's number seven position to the number two slot. Sales have increased an astounding 624%, leaping from 5 million barrels in 1970 to 36.2 million in 1979.

In the past year, the company's rate of growth dropped to 15.7%, down considerably from the 29.3%





increase in sales it tallied for 1978. Nevertheless, Miller increased its market share from 19.3 to 21.7% — just six percentage points behind industry leader Anheuser-Busch.

With a 1979 sales total of 46.3 million barrels, A-B's lead over Miller slipped by 300,000 barrels to an even 10 million. However, its sales growth for the past year — 11.3% — was more than double the figure for 1978. In addition, it increased its market share by 2.1 percentage points for a 27.7% total.

other brewers

The rest of the nation's top brewers did not fare as well, with half of the top ten experiencing a drop in sales.

Jos. Schlitz Brewing Co. suffered the most with a 15.8% decline in barrelage. The company's 1979 total of 16.5 million barrels is its lowest sales figure since 1970. Nevertheless, Schlitz managed to retain its position as the nation's third largest brewer.

The decline was much less dramatic for most of the others. Pabst's sales dipped a modest 100,000 barrels, falling from 15.4 million in '78 to 15.2 million in '79. For Olympia, the drop was somewhat sharper, with sales falling 7.5% for a 1979 total of 6.2 million barrels. Stroh's sales were down 300,000 gallons, for a volume of 6 million barrels, while Schaefer's sales dropped 10.3% to 3.5 million barrels.

On the positive side, Coors, Heileman and Schmidt all made modest gains during 1979. Coors, the nation's fifth largest brewer, made up the ground it lost in 1978 by once again bringing its sales gallonage up to the 12.8 million barrel mark.

Heileman again demonstrated the profitability of a regional brewer by increasing its sales 5.4% for a 11.1 million barrel total. The company also had the distinction of increasing its production capacity by 55% during 1979, largely due to the purchase of Carling National.

Further back in the ranks, Schmidt finished the year with a sales total of 3.9 million barrels, up 100,000 barrels from the 1978 figure.

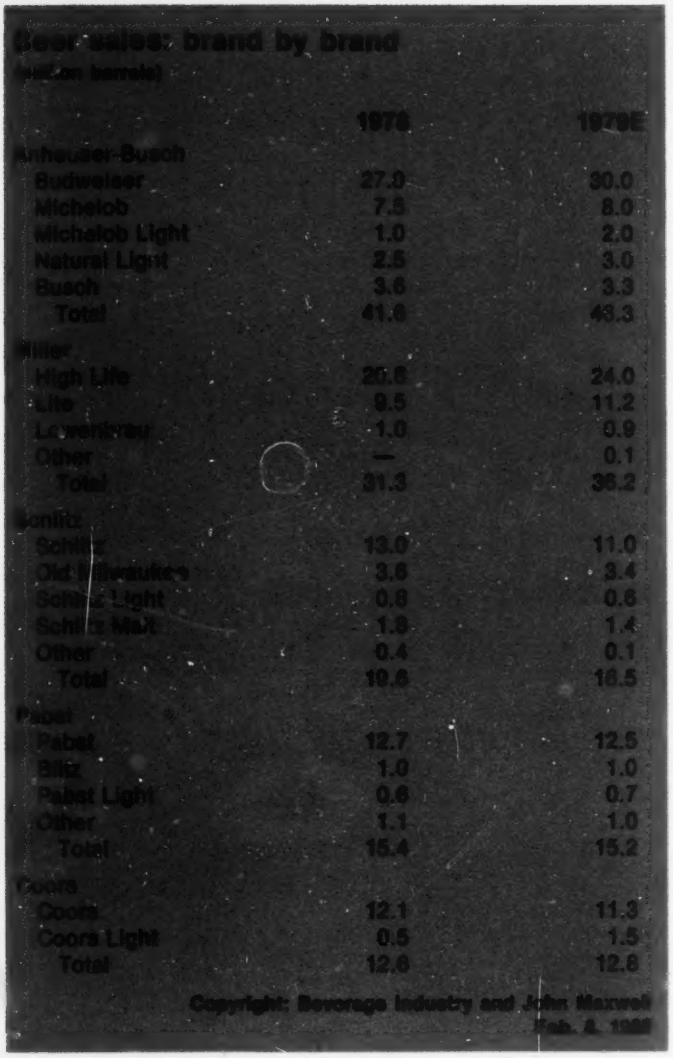
According to Maxwell's figures, the top five brewers collectively boosted their sales volume by 6.5 million barrels. Approximately 4.1 million of those barrels, or 58.5%, came from increases in the sale of light beers.

Miller once again dominated that market segment with 11.2 million barrels of Lite sold during 1979. That total is 17.9% higher than the figure for 1978.

Anheuser-Busch was the nearest competitor, but even if sales of its Natural Light and Michelob Light are combined, the total (5 million barrels) is still less than half of Miller Lite's sales for the year. Individually, sales of Michelob Light doubled during 1979 for a total of 2 million barrels. New packaging helped boost Natural Light sales by 20% for a 3 million barrel total.

Overall, Coors Light accounted for the sharpest increase in sales with a jump of 200% during 1979. With 1.5 million barrels sold during the year, Coors Light became the nation's fourth biggest selling light.

Pabst Extra Light narrowly edged out Schlitz Light for the number five position. Sales of that product increased by 100,000 barrels in 1979 for a total of 700,000. Although the advance was modest, it accounted for the only sales gain



Beer sales: brand by brand

(million barrels)

	1978	1979E
Anheuser-Busch		
Budweiser	27.0	30.0
Michelob	7.5	8.0
Michelob Light	1.0	2.0
Natural Light	2.5	3.0
Busch	3.6	3.3
Total	41.6	46.3
Miller		
High Life	20.8	24.0
Lite	9.5	11.2
Lowenbrau	1.0	0.9
Other	—	0.1
Total	31.3	36.2
Schlitz		
Schlitz	13.0	11.0
Old Milwaukee	3.6	3.4
Schlitz Light	0.8	0.6
Schlitz Malt	1.8	1.4
Other	0.4	0.1
Total	19.6	16.5
Pabst		
Pabst	12.7	12.5
Blitz	1.0	1.0
Pabst Light	0.6	0.7
Other	1.1	1.0
Total	15.4	15.2
Coors		
Coors	12.1	11.3
Coors Light	0.5	1.5
Total	12.6	12.8

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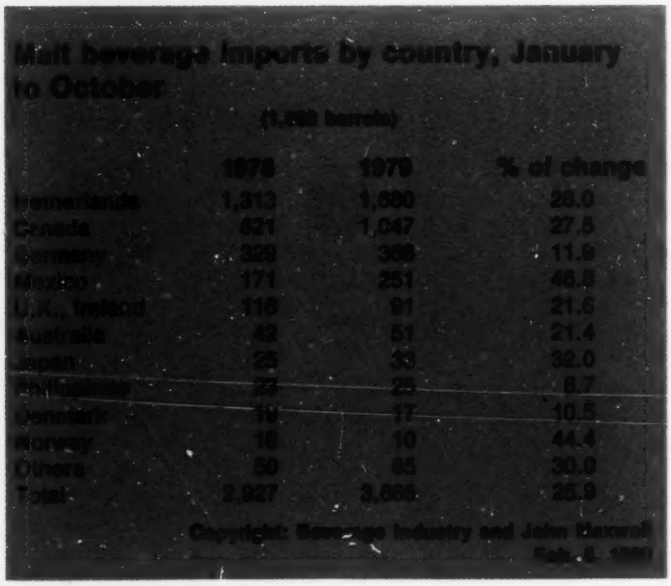
Feb. 8, 1980



Malt beverage imports by country, January to October

(1,000 barrels)

	1978	1979	% of change
Netherlands	1,313	1,660	26.0
Canada	621	1,047	27.5
Germany	329	368	11.9
Mexico	171	251	46.8
U.K., Ireland	116	91	21.6
Australia	42	51	21.4
Japan	25	33	32.0
Philippines	23	25	8.7
Denmark	19	17	10.5
Norway	18	10	44.4
Others	50	65	30.0
Total	2,927	3,686	25.9

Copyright: Beverage Industry and John Maxwell
Feb. 8, 1980

made by a Pabst product.

Of the top five brewers, only Schlitz experienced a drop in the sale of its reduced-calorie product. Schlitz Light, once one of the top selling low-calorie brews, continued its decline with a 25% drop in sales during 1979. Sales of that product not only dropped, but did so at a faster rate than any other Schlitz product.

premium sales

The sales gains were much less spectacular in the premium category. Here again, the drop in sales growth was not a departure from what has happened in recent years, but the continuation of a trend. As Walker pointed out in his speech to the nation's wholesalers, "the premium share of the beer industry has gained less than one percentage point in the last four years."

In 1979, sales of the top five premium brands grew at roughly half the rate of light beer sales. In addition, that limited collective growth was due solely to advances made by the flagship brands of Anheuser-Busch and Miller.

Miller High Life led the way with a 15.4% sales increase. With 24 million barrels sold during this year, the "Champagne of Bottled Beer" finished only 6 million barrels behind Budweiser.

But the "King of Beers" once again reigned supreme as the nation's best selling brew. Last year's 11% sales increase enabled Budweiser to become the first American beer to hit the 30 million barrel mark.

Sales of the three other top premiums — Schlitz, Pabst Blue Ribbon and Coors — all dropped during '79. Coors suffered the sharpest decline with sales dropping 44.7% to 11.3 million barrels.

The damage was less severe but in no way negligible for the Jos. Schlitz Brewing Co. Sales of Schlitz were down 15.4% to 11 million barrels. Much less drastic was the drop in sales of Pabst Blue Ribbon, with total volume falling 1.6% to 12.5 million barrels.

superpremium

Sales were even more disappointing for domestic brewers in

the superpremium category. A-B's Michelob retained its title as the top-selling superpremium with sales of 8 million gallons during 1979. But sales were up only 6.7% during the year — quite a drop from the 1978 increase of 21%.

On the negative side, new packaging, a new image and a stepped-up ad campaign failed to improve the performance of Busch, A-B's other superpremium. Sales dropped by 300,000 barrels for a 1979 total of 3.3 million barrels.

Sales of Lowenbrau, Miller's superpremium, also fell last year. Total volume fell from 1978's all-time high of one million gallons to 900,000 gallons for 1979.

Judging from Maxwell's figures, part of the reason for the slow down in domestic superpremium sales may be due in part to sharp increases in import sales. Beer imports were up by over 25% for the first ten months of 1979, spurred by a 28% increase in the importation of beer from the Netherlands. That country once again dominated import sales with 1.7 million barrels sold from January through October. Far behind was imported Canadian beer with slightly over one million barrels sold during the ten-month period.

With 368,000 barrels imported between January and October, German beers retained their position as the third best selling import category. But beers from that nation face a formidable challenge from Mexican brews. Imports of Mexican beers increased 46.8% in the first ten months of last year for a total of 251,000 barrels. In comparison, German imports increased by only 11%.

malt beverages

The market segment that showed the clearest sales decline was the malt liquor sector. Overall sales dropped from 4.6 million barrels two years ago to 4.3 million in 1979.

Surprisingly, one of the two products in the category that showed any strength was Schlitz' malt. Sales increased 100,000 barrels for a total of 1.9 million barrels.

The other brand that increased its market share was Iroquois Brands' Champale. With a total volume of 900,000 gallons, sales were up 12.5%.

Heileman's Colt 45 and Malt Duck and Pearl's Country Club all experienced a decline in sales with drops of 25.9%, 20% and 25% respectively.

Estimated rated capacity of leading brewers
(million barrels)

	1978	1979E	1980P	1981P
Anheuser-Busch	44.0	47.0	52.0	60.0
Miller	34.0	38.0	48.0	55.0
Schlitz	30.0	30.0	30.0	25.0
Pabst	18.5	18.5	20.5	21.0
Coors	16.0	15.0	15.0	15.0
Total	142.5	148.5	165.5	176.0

Copyright: Beverage Industry and John Maxwell
Feb. 8, 1980

Estimated malt liquor sales volume
(1,000 barrels)

	1976	1977	1978	1979
Schlitz (Schlitz)	1,500	1,700	1,800	1,900
Colt 45 (Heileman)	1,400	1,400	1,350	1,000
Malt Duck (Heileman)	110	110	125	100
Country Club (Pearl)	450	450	400	300
Champale (Iroquois)	700	700	800	900
Total	4,170	4,510	4,575	4,250

Source: Beverage Industry and John Maxwell
Feb. 8, 1980

Top 10 metropolitan markets for imported beers

Standard metropolitan areas	1977 barrel sales Barrels	% of total U.S.
1. New York	606,400	24.9%
2. Chicago	307,000	12.6
3. Los Angeles/ Long Beach	232,600	9.6
4. Nassau-Suffolk	150,400	6.2
5. San Francisco/ Oakland	110,100	4.5
6. Boston/Lowell/ Brockton/Lawrence/ Haverhill	85,600	3.5
7. Cleveland	82,400	3.4
8. Washington, DC	66,300	2.7
9. Miami	54,300	2.2
10. Buffalo	53,100	2.2
Total for Top Ten	1,748,200	71.9%

Source: Estimate done for *Time* by Clark Gavin Associates

Copyright: Beverage Industry
May 9, 1980

Brewery advertising expenditures

Manufacturer and Brand:	1978 ($ mil.)	1978 volume (mil. barrels)	1979 ($ mil.)	1979 volume (mil. barrels)	Change in ad expenditures '78-'79 (%)
Anheuser-Busch					
Natural Light	11.5	2.5	16.6	3.0	44.3
Budweiser	16.3	27.0	29.2	30.0	79.1
Busch and Busch Bavarian	4.2	3.6	8.0	3.3	95.0
Michelob	9.1	7.5	15.4	8.0	69.2
Michelob Light	4.6	1.0	16.3	2.0	254.3
Total	**45.7**	**41.6**	**85.5**	**46.3**	**87.1**
Miller					
Lowenbrau	11.7	1.0	17.0	0.9	45.3
Miller High Life	15.3	20.8	29.6	24.0	93.5
Miller Lite	15.3	9.5	27.7	11.2	81.0
Others	0.3	—	—	0.1	
Total	**42.6**	**31.3**	**74.3**	**36.2**	**74.4**
Schlitz					
Old Milwaukee	3.6	3.6	5.2	3.4	44.0
Schlitz	14.1	13.0	29.6	10.5	90.9
Schlitz Light	5.0	0.8	6.6	0.6	32.0
Schlitz Malt Liquor	5.1	1.8	7.4	1.4	45.1
Other	0.4	0.4	—	0.1	
Total	**28.2**	**19.8**	**44.7**	**16.5**	**58.5**
Pabst					
Andeker of America	0.9	—	0.1		-92.2
Pabst Blue Ribbon	9.1	12.7	10.0	12.5	9.9
Pabst Extra Light	4.9	0.6	4.8	0.7	-2.0
Other	—	2.1	—	1.0	—
Total	**14.9**	**15.4**	**14.8**	**15.2**	**-0.1**
Coors					
Coors	5.0	12.1	11.2	11.3	124.0
Coors Light	.5	0.5	3.7	1.5	640.0
Total	**5.5**	**12.6**	**14.9**	**12.8**	**171.0**
Heileman					
Blatz	0.9	—	1.9	—	-1.11
Heileman	1.3	—	0.6	—	-51.5
Old Style	1.6	—	2.0	—	25.0
Rainier	0.5	—	0.6	—	34.0
Schmidt	0.4	—	0.5	—	27.5
Wiedemann's	0.1	—	0.2	—	100
Total	**4.8**	**10.5**	**5.9**	**11.1**	**22.9**
Olympia					
Hamm's	1.0	—	2.2	—	120.0
Olympia	6.0	—	7.2	—	20.0
Olympia Golden Light	2.0	—	1.8	—	-10.0
Lone Star	0.5	—	0.6	—	12.0
Total	**9.5**	**4.7**	**11.8**	**6.2**	**24.0**
Stroh	6.2	6.3	11.3	6.0	82.0
Schmidt's	3.0	3.8	3.3	3.9	10.0
Schaefer	2.3	3.9	6.6	3.5	187.0
Genessee	1.5	3.0	4.5	3.4	200.0
All others	10.0	7.5	19.4	5.9	94.0
Total	**174.2**	**162.2**	**297.0**	**167.0**	**70.4**

Source: LNA

Copyright: Beverage Industry May 23, 1980

	1976	1977	change	1978	change	1979	change
Bottles							
January	142.9	146.0	2.2%	150.3	3.0%	160.5	6.8%
February	142.6	145.2	2.2	152.0	4.7	162.2	6.7
March	142.5	146.6	2.9	153.2	4.5	163.1	6.5
April	146.0	147.4	1.0	151.4	2.7	159.6	5.4
May	144.6	146.8	1.5	152.6	4.0	164.7	7.9
June	144.7	147.4	1.5	153.7	4.3	167.0	8.7
July	145.3	148.1	1.9	152.4	2.9	**167.2**	**9.7**
August	145.4	148.1	1.9	153.8	3.8	**166.9**	**8.5**
September	145.6	148.9	2.3	155.0	4.1	**167.0**	**7.7**
October	145.4	149.4	2.8	156.3	4.6	**170.5**	**9.1**
November	146.0	149.8	2.6	159.4	6.4	**170.5**	**7.0**
December	146.0	149.1	2.1	159.9	7.2	**172.2**	**7.7**
12 months	144.8	147.7	2.0%	154.2	4.4	**166.0**	**7.7**
Cans							
January	131.7	132.4	0.5%	137.7	4.0%	149.6	8.6%
February	132.0	133.1	0.8	137.8	3.5	150.1	8.9
March	132.0	133.1	0.8	139.2	4.6	151.4	8.8
April	132.0	133.2	0.8	138.1	3.7	153.2	10.9
May	131.6	133.8	1.7	138.6	3.6	154.6	11.5
June	131.7	134.7	2.3	139.4	3.5	155.8	11.8
July	131.6	134.9	2.5	140.8	4.4	**156.5**	**11.2**
August	132.0	135.4	2.6	142.0	4.9	**157.2**	**10.7**
September	132.0	135.6	2.7	143.8	6.1	**157.5**	**9.5**
October	131.9	135.9	3.0	146.3	7.7	**160.3**	**9.6**
November	132.3	133.8	1.1	148.0	10.6	**161.5**	**9.1**
December	132.3	137.1	3.6	149.0	8.7	**163.1**	**9.5**
12 Months	131.9	134.4	1.9%	141.7	5.4	**155.9**	**10.0**

Beer retail price indexes

	1976	1977	change	1978	change	1979	change
Bottles							
January	141.1	144.7	2.6%	147.8	2.1%	160.8	8.8%
February	141.4	144.3	2.1	148.6	3.0	163.6	10.1
March	142.5	145.0	1.8	150.8	4.0	166.1	10.1
April	143.1	145.3	1.5	152.1	4.7	167.7	10.3
May	143.8	145.9	1.5	152.9	4.8	169.2	10.7
June	144.1	145.5	1.0	153.0	5.2	170.0	11.1
July	144.6	146.2	1.1	154.0	5.3	**170.3**	**10.6**
August	144.2	145.8	1.1	155.1	6.4	**170.6**	**10.0**
September	144.0	146.6	1.7	156.8	7.0	**172.3**	**9.9**
October	144.8	146.4	1.1	158.1	8.0	**175.1**	**10.8**
November	145.4	147.6	1.5	158.6	7.5	**176.9**	**11.5**
December	145.8	147.2	1.0	159.6	8.4	**177.8**	**11.4**
12 Months	143.7	145.9	1.5%	154.0	5.6	**170.0**	**10.4**

Source: USBA
Department of Commerce

**Copyright: Beverage Industry
September 15, 1979**

Bottled water sales trends

'Bloom off the rose' as water market matures

In 1979, operating out of cramped headquarters in midtown Manhattan, Perrier was the clear leader in the bottled "soft drink" water market with no significant national competition in sight.

In 1980, in plush suburban surroundings – but with still narrow margins – the French water must prepare to face down the challenge of Canada Dry Club Soda, a domestic mixer reborn as a result of favorable media taste tests.

A year ago, this bottled water market was exploding with astronomical growth rates and a multitude of new products.

This year, the market has "matured" – the industry euphemism for slower growth rates – and a number of those much-ballyhooed waters are already being poured down the failed product drain.

How much growth does the market for bottled sparkling and still, 'natural' and processed waters have left? Which brands will survive to profit their backers? What does it take to succeed, big like Perrier?

The answers are still uncertain, but some lines are starting to appear.

For one, the market is hooked in to a number of parallell trends: an aging American population; its increasing affluence, sophistication and health consciousness.

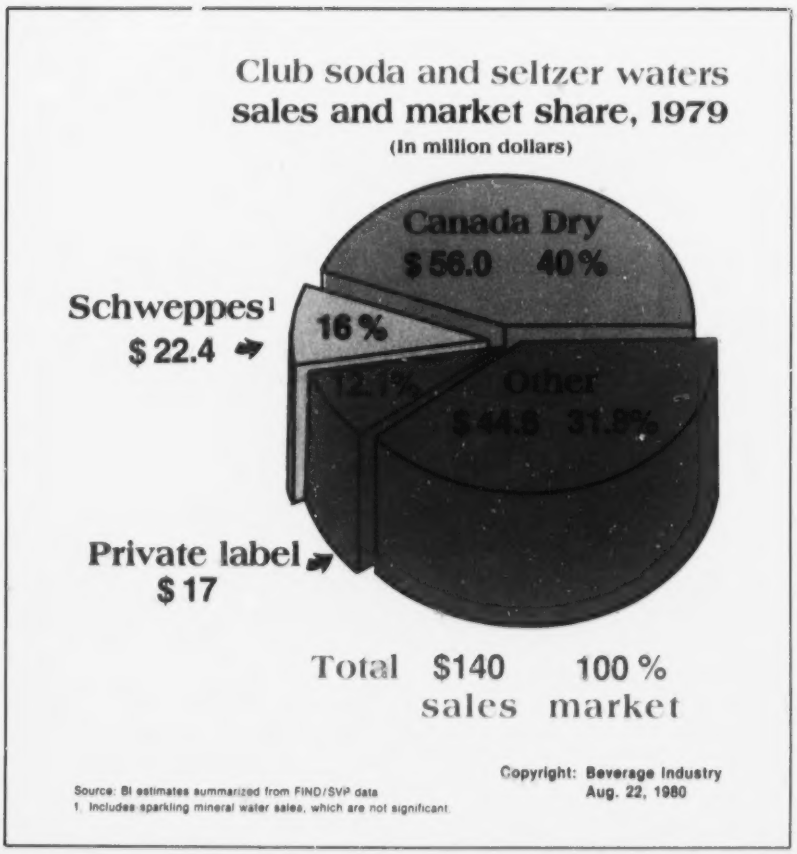
These trends will continue – one is a demographic fact and the others are projectable consequences. But, growth rates can't continue at 200-300%. **Beverage Industry** projects a growth rate in the area of 10% for the immediate future (perhaps less in recessionary 1980) and then continue in the 5-7% range into the mid and late '80's.

As beverage marketers watch these trends, they will also be keeping an eye on a number of variables: the affect of demographics and economics on disposable income (it may well be lower in the future); the loyalty and partiality of consumers to the beverages they were brought up on; and, of course, the intense competition for the public's beverage dollars.

survival and success

In this environment, it will take more than big advertising dollars to survive. Several brands that spent heavily on that media exposure last year are now either rumored to be on the ropes, or are actively revising their marketing and distribution stategies. Good product, careful positioning, creative promotions and aggressive distribution all have to be part of a successful market plan.

As successful as Perrier? Perhaps, but it is still an open question whether Perrier is anything more than a sales success. FIND/SVP, The Information Clearinghouse in New York, says in its recent report, "U.S. Bottled Water Market: Prospects in 1980 and Beyond", that despite its 75% share of the sparkling and still



mineral water segment, Great Waters of France still hadn't turned a profit as late as last year, and might be ripe for acquisition.

"The classic pattern in a maturing market is acquisition," said John Perry, director, research projects service for FIND/SVP. He added that many of the other brands introduced recently may also be looking to sell out to a benevolent sugar daddy.

Or, as Jim Stevens, senior vice president-sales at Perrier's domestic subsidiary Great Waters of France, put it: "The bloom is off the rose a bit."

Perry added that, upon a closer examination of sales figures Perrier had claimed last year, FIND/SVP was compelled to lower both figures for Perrier and the entire sparkling/still mineral water segment. Thus, some statistics appearing in the final report are different from those reported in **Beverage Industry's** June 6 preview of the study.

"Latest industry information has caused us to revise downward our 1979 estimate of the retail sales volume of sparkling/still mineral waters from $158.2 million to $137.7 million," Perry said. "Data for 1976-78 has had to be revised upward."

With an eye to the future, Perrier has set up another subsidiary, Great Waters of America, by which it evidently intends to market domestic waters. It recently purchased Equinox Springs in Manchester, VT and another in Warm Springs, GA. Having opened up the market with Perrier, it is possible that the firm will debut a less expensive and more profitable domestic product while increasing prices and margins on Perrier.

Says Stevens: "We have bought several springs . . . but the question is one of evolution . . . we have no definite plans until we can get a better fix on the industry."

He went on: "Too many people have run into this thing. But, we're here for the long term; not just today, but today and tomorrow."

realism in Maine

A spring Perrier once owned — now one of the few headed toward continued prosperity, is Poland Spring in Maine. Mike Schott, vice president and chief operating officer, was soberly realistic as he described the problems his company has run into, and the ways it plans to overcome them.

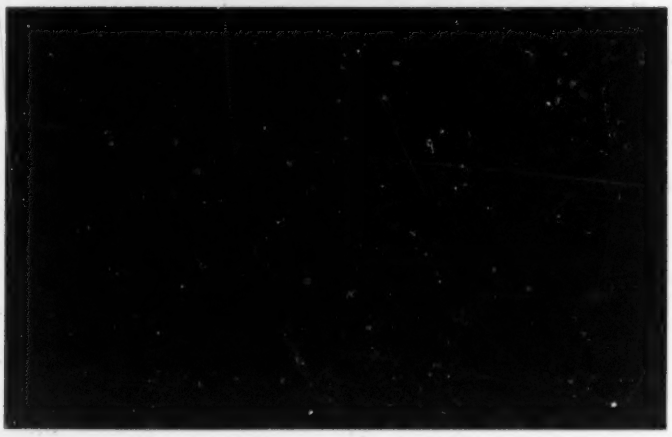
For instance, he noted, "There is a bit more consumer suspicion and skepticism over the value of bottled waters." Schott suggested that some waters have focused too much on image and not enough on the actual benefits of the products. "They have not gotten over the 'hoola-hoop' stage yet," he added.

Poland Spring, though, is in the

midst of redoing its creative message. "We are trying to marry image to the true product benefit," Schott said. "And it's awfully tough to tell the story that needs to be told in a 30-second TV spot." He reported that the company will be emphasizing print and radio in its $1.5 million budget.

Acknowledging low profits on the West Coast because of freight costs, Schott noted that, for Maine-based Poland Spring, "The profit potential opportunities will never be what they are east of the Mississippi."

This is confirmed in the FIND/SVP report, which, using Harvard Business School estimates, shows that Poland is actually losing money on the West Coast, while Perrier is just about braking even. Apparently, staying small and close to home with distribution and advertising is a distinct advantage in the bottled water market.



local favorites

Although many of the domestic bottled mineral waters introduced in the last few years are seeking to expand their marketing areas — most profess national aspirations — they have enjoyed their greatest success in their local region. Positioning their products as "favorite sons", as opposed to the foreign brands whose names local folks can barely pronounce, regional water companies such as Syfo in Florida, Artesia in Texas and Calistoga in California are capturing significant market share on their home turf.

Local advertising, creative promotions and lower prices combine to offer the smaller producers better margins than their larger competitors. This also makes them likely targets for acquisitions. But, whoever owns them, **Beverage Industry** believes that the smaller, independent producer will continue to play significant role in the bottled "soft drink" water market. Though the number of national brands may well shake out to four or five, the bottled water story will always have to be told with reference to the local waters that are usually among any given region's top five selling brands.

Also, as this market develops, mineral water firms will begin to experiment with flavorings. There are presently two such lines available, with imports San Pellegrino of Italy and Radenska of Yugoslavia. These products are slightly flavored versions of the mineral water, usually a citrus, and may well represent the next beverage wave, light, premium soft drinks.

San Pellegrino's importer, Susa, Inc., a Delaware Corp. recently dissolved its joint venture with Moxie and is now independently operating out of New York. Joseph V. Calise is the chairman of the board and Zina G. Babcock is the general manager. Marketing and advertising plans were still in the works at presstime.

Radenska is being represented by Cavlieri, Kleier and Pearlman of New York, and is also in the process of evaluating the market and distributors. "I think there is a very good potential for premium soft drinks," said Robert Pearlman, who is acting as Radenska's domestic consultant.

"We intentionally stayed out last year," he noted, but will be ready to move in the fall.

analysts' view

Analyst Arthur Stupay of Prescott, Ball and Turben in Cleveland, said the growth of the bottled "soft drink" waters and the potential for such flavored mineral waters is part of a "hot to cold, cold to light, light to no-calorie" trend in beverages.

"In the 80's there will be a proliferation of slightly flavored waters and more regional brands,"

he said, cautioning that many of the brands now available need to improve their shelf and market presence. "And this can be best met by creative packaging and creative marketing."

"This market will grow at an accelerated pace until the carbonated beverage industry comes up with a tasteful and healthful low calorie beverage. In the meantime, this segment will benefit from societal shifts from high priced luxury goods to low priced luxury goods, such as bottled waters."

But Analyst Manny Goldman, of Sanford C. Bernstein in New York, views the situation differently. "I have my doubts on the viability of significant growth in that market. Americans are used to having something in their water and the American way is fairly significant carbonation . . . some zing."

Beverage marketers must be careful not to extrapolate from the European market, he went on. Bottled water consumption in Europe is part of a wine-oriented culture which uses the water to dillute the wine.

"The cultural aspect is crucial," he added.

A company that has taken full advantage of the bottled water boom is White Rock, which has come out with its own sparkling mineral water to complement its club soda and seltzer products. But President Al Morgan, Jr. is not bullish on the market's future. "We're happy we're in it, but disagree with FIND/SVP that this thing is just going to keep growing."

White Rock's business is mainly in the Northeast, which is the heartland for club soda sales, according to statistics from Simmons Market Research Bureau. Simmons' data shows that most club soda consumers earn over $30,000, are middle aged, well educated and living the Northeast.

Building on figures like these, as well as a publicity windfall in the form of a favorable taste-test against Perrier in *The New York Times,* Canada Dry has drastically increased its ad budget for club soda in 1980 to $5 million and appears to be the most likely

challenger to Perrier's dominance of this market. (See BI 4/11/80 and 6/6/80.)

With national distribution already in place, Canada Dry, a subsidiary of Norton Simon, has seen double-digit percentage increases in many of the cities it has tried its "Connoisseurs' Choice" campaign. "The established brand name, with continued advertising should assure them a growing place in the sparkling water market," reports FIND/SVP. Higher margins because of lower shipping costs adds to the products' market attractiveness.

Also among Perrier's more prominent challengers is Montclair, a Canadain water marketed by Allan Beverages, a Nestle subsidiary. Nestle also markets Deer Park which, in its "soft drink" packaging, is reported not faring well. But, Montclair's sales are up about 12% from last year, reports President Robert W. Woodworth, and the product is now in about 40% of the U.S. "It is our intention that we will be national in distribution in 1981," going mostly with soft drink bottlers, he said.

"I think that we can develop a very healthy, attractive, new beverage market and we intend to be one of the major competitors in this market," Woodworth added.

more segmentation

Last year, there was one Saratoga Springs, NY-based company in the bottled water market, but this year, as the market increases its segmentation, there are two, both offering two products.

The Saratoga Springs Co. was on the market last year with Saratoga Naturally Sparkling Mineral Water, an updated version of the company's old product, Saratoga Vichy Water. But, according to Chairman William White, the company recently brought back the older product due to popular demand. "Some folks like it in a loyal way and they got it," he said.

The company is moving more slowly this year on expansion of its newer water and is trying to sign up more beer distributors to take the product store-door. Says White, somewhat cautiously: "Too much puff and fluff was in the air in 1979 and I don't intend to contribute to more of it in 1980."

The second Saratoga company claims it was really the original and that "the state has been bottling the product since 1909." Waters of Saratoga Springs, Inc. markets two products: Saratoga Geyser, a carbonated water, and State Seal 100% Naturally Pure Water, which is not carbonated.

Chuck Sterling, president, says Saratoga Geyser "comes out of the ground naturally carbonated" and the company only "maintains the environment" in the production process.

The tag line for advertising says the waters are: "From the springs that gave Saratoga its name". Sterling's goal for the company is to make it the number one domestic water firm. After an intial roll-out in the northeast corridor, he hopes for 75-80% penetration within four to eight months.

"There's going to be a breakout and we feel we are going to be the one to break out of the pack," he added.

Among other waters presently on the market in the Northeast are Ferrarelle and Peters Val. While Ferrarelle is waiting to see how it does on the New York market, Peters Val is going ahead with introductions in a number of other markets, including Washington, DC and Ohio.

But perhaps "waiting" is the best way to sum up the bottled water market in 1980. Waiting on the economy, waiting on the market leaders and waiting on consumers tastes to become more clearly defined.

Import statistics by country of origin: 1979

Country	Gallons	Dollar value
France	24,279,007	$47,353,900
Italy	1,629,515	2,049,489
Canada	757,291	1,842,465
Federal Republic of Germany	559,843	972,718
Austria	348,782	609,449
Mexico	170,242	241,552
Yugoslavia	98,465	86,991
Portugal	77,396	97,549
Sweden	67,705	142,447
Netherlands	57,628	88,415
Other (15 countries)	95,261	184,607
Total	28,141,135	$53,669,582

Source: U.S. Dept. of Commerce: Bureau of the Census, "Imports 146: U.S. Imports for Consumption, TSUSA Schedule by TSUSA Number (16610) by Unit Control by Country of Origin".

Copyright: Beverage Industry
August 22, 1980

Retail prices of bottled water: first quarter, 1980

(Cents per ounce)

Fiuggi	4.30¢
San Pellegrino	3.72
Apollinaris	3.71
Badoit	3.63
Contrexeville	3.63
Peters Val	3.43
Evian	3.30
Montclair	3.11
Vichy-Celestins	3.03
Perrier	3.00
White Rock Sparkling Mineral Water	2.87
Saratoga	2.71
Ferrarelle	2.63
Canada Dry Club Soda	2.46
Poland Spring	2.34
Mountain Valley	2.16
Deer Park 100%	2.11
Deer Park Spring	0.77
Great Bear	0.69
Hinckley-Schmitt	0.54
U.S. 5-gal. jug average	0.43

Source: Business Trend Analysts

Copyright: Beverage Industry
August 22, 1980

American wine market grows up

Spurred by what industry analysts call a move to moderation, Americans in increasing numbers are trading in their manhattans and martinis for wine.

The consensus both here and abroad is that wine, one of the world's oldest beverages and long a way of life in Europe, is coming of age in the United States.

On this score, industry insiders make several uniform predictions: by 1990 Americans will double their per capita consumption of wine, from 2 to 4½ gallons annually; California, fountainhead of the U.S. wine industry, will make its presence felt internationally; and The Coca-Cola Co. will become the "Great American Wine Company".

"Wine is entering the arena of the big beverages," Marvin Shanken, publisher of the respected wine and spirits newsletter *Impact*, told **Beverage Industry.** "And as the American consumer becomes more and better educated it is almost conditional that he will be receptive to trying wine."

table wine growth

Wine's undisputed growth area is the table wine sector. As sparkling wines and vermouth inch forward, and pop and dessert wines plummet further, table wines continue to flex their muscles.

Table varieties currently account for seven of every ten bottles of wine sold in the U.S.

"The primary trend in the United States is growth of table wine," Shanken said. "By 1990, I forecast better than 90% of wine sold in this country will be table wine. And that group will be dominated by California wines."

It will also be dominated by white wines, now holding a 40% share of the table wine market.

"The boom being experienced by white wine as a cocktail," Shanken said, "is bridging the gap between wine as a mealtime beverage to an anytime beverage."

While soft drinks and beer enter the 1980's as the industry's clear-cut thoroughbreds, wine has begun

Overview of 1978 wine shipments

(millions of gallons)

Category	1977	1978	Gallonage change	Change*
Table wine				
U.S. produced	205.2	222.4	17.2	8.4%
Imported[1]	58.4	81.2	22.8	38.9
Total	263.6	303.6	40.0	15.1
Dessert wine				
U.S. produced	54.5†	50.1	−4.4	−8.1
Imported	2.6	3.3	0.7	30.4
Total	57.1	53.4	−3.7	−6.5
Vermouth				
U.S. produced	5.2	5.3	0.1	1.7
Imported	3.8	4.2	0.4	12.4
Total	9.5	9.5	0.5	6.2
Sparkling wine				
U.S. produced	21.7†	21.7	—	—
Imported	2.9	4.3	1.4	46.8
Total	24.6	26.0	1.4	5.6
Special natural — U.S.				
Not over 14%	33.1	26.4	−6.7	−20.3
Over 14%	12.4	11.1	−1.3	−10.4
Total	45.5	37.5	−8.0	−17.6
Other imported wines				
Total	0.6	0.6	—	5.0
All U.S. produced wines	332.1	337.0	4.9	1.5
All imports	68.3	93.6	25.3	37.1
Total wine shipments	**400.4**	**430.5**	**30.1**	**7.5**

[1]Including Spanish Sangria, not including "other" imported wines.
*Based on unrounded data.
†1977 figures amended by BATF, originally published as 53.6 million gallons dessert wine and 21.4 million gallons sparkling wine.
Source: Impact Databank.

Copyright: Beverage Industry Feb. 22, 1980

Ten largest American wineries — total wine shipments*

(millions of gallons)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	Change 1977-78
1. E. & J. Gallo	79	100	108	100	100	100	102	110.2	105.8	−4.0%
2. United Vintners (Heublein)	44	50	42	54	49	59	56	56.7	56.4	−0.4
3. Almaden (National Distillers)	8	8	12	14	15	16	19	21.0	25.8	23.2
4. Canandaigua	9	9	10	11	12	15	15	15.8	16.1	1.9
5. The Wine Spectrum (The Coca-Cola Co.)	—	9	10	11	12	12	11	12.2	14.0	14.8
6. Paul Masson (Seagram)	4	5	5	7	8	9	10	11.9	13.8	15.7
7. Guild	8	14	14	13	13	14	15	14.5	13.8	−4.8
8. Monarch	6	7	8	9	10	10	11	11.2	11.6	3.6
9. Mogen David (Coca-Cola of New York)	8	8	12	14	12	11	10	10.9	11.3	3.6
10. Franzia (Coca-Cola of New York)	6	7	8	11	11	11	12	10.5	10.6	1.0
Total — ten largest	176	217	230	244	241	257	261	275.8	279.2	1.8
Total wine shipments in U.S.	267	306	337	347	349	368	378	400.4	430.5	7.5%

Source: Beverage Industry

Note: Years 1970-1976 have rounded totals in millions. 1977 and 1978 gallonage rounded in hundreds of thousands of gallons. Percentage change accuracy to hundredth standard for both 1977 and 1978.

Copyright: Beverage Industry Feb. 22, 1980

to make its move to the inside in the beverage derby. BI estimates wine will soon pass distilled spirits in total U.S. consumption and continue to post gains on fruit juices.

Milk, coffee and tea still hold comfortable leads on wine.

"The others are mature beverages," answered Russell G. Hopkins, president of the National Wine Distributors Assn. "We're still in our infancy."

Like a young soldier, though, wine is growing up fast in the United States.

7.5% gain in 1978

A look at figures released by *Impact* helps tell the story. In 1978, total U.S. wine consumption jumped from 400 to 430 million gallons, the biggest increase since 1971. That 7.5% gain helped wine break out of its 1973-76 slump and position itself for a healthy 1980's.

C. James Walker III, analyst at Shearson Loeb Rhoades cites two factors to explain wine's recent success. "We've seen a long overdue upgrading of American wine and we've seen a huge increase in advertising on television," he said. "Liquor can't be advertised on TV, so that's a big advantage for wine."

Wine watchers agree that American wines, which account for about 80% of sales here, had to be improved to keep pace with the increasingly sophisticated tastes of American wine drinkers.

Improved winemaking techniques and the use of better quality grapes heralded the arrival of upgraded U.S. wines. And California, blessed with fertile wine-growing regions, was at the heart.

Impact's Shanken now says, "California is the world leader in consistently good wine offered to the public at reasonable prices."

The reputation of California wines has grown in such leaps and bounds that France's discriminating and highly critical food book, *Le Nouveau Guide Gault-Millau,* recently trumpeted the "golden age" of California wines.

"America is fortunate it has California," Shanken said. "In the next ten years California wine exported around the world will become a highly significant aspect of its business."

California today exports less than 1% of its wine, but Shanken predicted that figure could grow to between 5 and 8% by the year 2000.

enter Coca-Cola

American winemakers turned to television to get their message to consumers. Nowhere was this better evidenced than in the case of Coca-Cola, a late entry into the field.

After purchasing the Taylor Wine Co. in 1977 — a move fueled by Coke's concern over its heavy reliance on soft drinks — the company headed straight for Madison Avenue. What emerged was comparative ad campaign that shook the industry's foundation and ushered in a new era in U.S. wine marketing.

In the TV ads, Coke compared its Taylor California Cellars brand to the similarly priced products of competitors Almaden, Sebastiani, Inglenook and C. K. Mondavi.

"We simply wanted to tell the consumer as directly as possible that we make a better wine," explained Grant Curtis, director of marketing services for The Wine Spectrum, Coke's New York-based wine marketing arm. "We think that's valuable information for consumers to have — not only that the wine tastes good, but in what kind of price category. It's a straight forward, frontal approach to marketing."

Other vintners strenuously objected and the Bureau of Alcohol, Tobacco and Firearms threatened prosecution under an old law ban-

Share of market trend — wine entering distribution channels by type

Type	1960	1970	1971	1972	1973	1974	1975	1976	1977	1978
Table	32%	50%	51%	52%	56%	57%	58%	61%	66.9%	70.5%
Dessert	54	28	24	22	20	19	18	16	14.3	12.4
Vermouth	4	4	3	3	3	3	3	3	2.2	2.2
Sparkling	3	8	8	6	5	6	6	6	6.1	6.0
Special natural	7	10	14	17	16	15	15	14	11.4	8.7

Source: Impact Databank

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Imports of total wine into U.S. by type
(millions of gallons — rounded)

Type	1970	1971	1972	1973	1974	1975	1976	1977	1978	Change 1977-78
Table*	20	26	37	45	41	40	49	58.4	81.2	39%
Champagne & Sparkling	2	2	2	2	2	2	3	2.9	4.3	47
Dessert	2	2	2	2	2	2	3	2.6	3.3	30
Vermouth	5	5	5	5	5	4	4	3.8	4.2	12
Subtotal	29	35	46	54	50	48	58	67.7	93.0	37
Other	1	1	1	1	1	1	1	0.6	0.6	-5
Total	30	36	47	55	51	49	59	68.3	93.6	37%

*Includes Sangria
Source: NAABI, restated by Impact.

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Feb. 22, 1980

ning comparative ads. The charges were later dropped and the law changed. But, by the time the curtain came down on the soap opera, Coke had a well-known brand of wine and had changed the rules of the game.

"Coca-Cola has been the most aggressive innovator in the U.S. wine market since it began its full-court press 18 months ago," Shanken said. "It is breaking traditional marketing rules and enjoying great success. With Taylor California Cellars, Coke is segmenting the American table wine market the way Miller (Brewing Co.) segmented the beer market."

Coke has already invested over $100 million in the wine business and currently ranks as the No. 5 American winemaker with shipments of 14 million gallons in 1978. Ahead of Coke are industry giant E. & J. Gallo (106 million gallons shipped in '78), United Vintners (56), Almaden (26) and Canandaigua (16).

"We're aiming to be No. 1 in five years," said Margaret Stern, a Wine Spectrum spokesman. "And we think it's achievable."

Can The Wine Spectrum, which also holds The Monterey Vineyard and Sterling Vineyards, really hope to catch Gallo?

"Our strategy is different from Gallo's," Stern said. "We will acquire new lines of wine both here and abroad."

Coke recently entered into a marketing agreement with vermouth-maker Cinzano of Italy. The import is not likely to be acquired by Coke, though, since 50% of its stock is held by car manufacturer Fiat.

Stern said The Wine Spectrum has daily conversations about acquiring other name imports, but declined to list specific companies.

Imports

There is widespread agreement that imports, currently commanding about one-fifth of the American market, will continue to play a major role here.

With wine consumption in the United States expected to reach the one billion gallon mark around the turn of the century, California is not likely to have the grape power to supply America's needs.

Thus, imports, which as a group suffered slight loss of market share during the first six months of 1979, have a bright future here.

"The next year or two will be difficult for imports," Shanken predicted, "but then they will grow."

He said imports will probably reach a 30% share of the U.S. market and hold steady.

Current import leaders include Riunite of Italy (14% share of the import market in '78), Giacobazzi of Italy (5%), Mateus of Portugal (4%), Cella of Italy (4%), Blue Nun of Germany (4%), Yago of Spain, imported by Pepsi-Cola Co. subsidiary Monsieur Henri Wines Ltd., (4%), Bolla of Italy (4%), Folonari of Italy (4%), Lancers of Portugal (3%) and Zonin of Italy (2%).

Prior to the 1979 slowdown, imports grew at a phenomenal 37% rate in 1978, compared to the very modest 1.5% growth registered by U.S. wines.

Wine's overall success story remains tempered by the fact that the beverage is still consumed mainly by the metropolitan affluent.

Primary packaging trends

Primary packaging '80: glass makes a comeback

Dominated at the close of the 1970's by the plastics boom, primary packaging in the beverage industry will likely see a resurgence of glass in the early 1980's.

While 2-L PET packages for soft drinks remain on the upswing, failure of the 1-L package to take hold has given glass a new shot at increased market share, industry analysts agree.

"Plastic has already made its greatest impact," Arthur Stupay, partner-analyst at Prescott, Ball & Turben, told **Beverage Industry.** "And since the 1-L trust is not here yet, the growth in beer and soft drink consumption will lead to higher use of glass bottles."

Stupay predicted a 2-3% annual growth rate for glass.

Within the glass packaging segment, single-service bottles — 7-, 10- and 16-oz. packages that rely on sleek appearance — are drawing the most attention. Industry insiders say 1980 could be the year of single-service.

"It's come out of nowhere to dominate the 10- and 16-oz. market in 1980," Stupay said of the single-service package. "It's been cannibalizing other packages, taking away from large size bottles."

The increased emphasis on the package at single-service leader Owens-Illinois, which expects to have the lion's share of the estimated $300 million market this year, illustrates its upward movement.

O-I shipped the majority of the industry's 850 million single-service bottles last year, four times the 200 million units shipped in 1978. Projections for this year approach 1.5 billion, and the Toledo, OH-based manufacturer expects shipments of nearly three billion units in 1981.

Speaking before a recent meeting of the Los Angeles Society of Financial Analysts, O-I Chairman and Chief Executive Officer Edwin D. Dodd said, "This packaging concept will do more than help offset the switch of family-size glass for soft drinks to plastic. The tremendous initial success with the single-service package reinforces our conviction that it will make glass more than competitive with metal cans for soft drinks in single-service."

O-I's single-service package features a lightweight glass container wrapped in a foamed plastic label,

U.S. beverage and container consumption

Item	1976/8	1990	% projected annual growth
Population (mil.)	216.8	241.0	.8
gal/capita	144.2	161.8	.9
Beverage consumption (bil. gal)	31.26	38.99	1.7
containers/gallon beverage	4.43	4.63	.3
Containers (bil. units)	138.59	180.70	2.1

Source: Predicasts Research Group

Copyright: Beverage Industry
June 20, 1980

Beverage, returnable	729.2	729.1	0
Beverage, NR	5,948.2	6,861.7	−13.3
under 10 oz.	226.2	319.4	−29.2
10.0-15.9 oz.	2,532.1	2,871.4	−11.8
16.0-16.9 oz.	2,096.4	2,040.1	+ 2.7
17.0-33.9 oz.	808.3	975.9	−17.2
34.0-over	285.3	654.2	−56.4
Beer, returnable	352.5	204.6	+72.3
Beer, NR	13,576.0	12,707.3	+ 6.8
under 11 oz.	2,240.1	2,431.0	− 7.9
11.0-15.9 oz.	10,668.4	9,634.6	+10.7
16.0-over	667.6	641.7	+ 4.0

*preliminary

employing Contour-Pak carriers made of polyethelene.

Also beginning to make inroads in the single-service field is Kerr-Heye's new entry, the Ultra-Performer bottle. The package features a generic Kerr-Heye bottle with a reverse rotogravure-printed, heat-shrinkable plastic sleeve that acts as a label. It is being sold in a six-pack wrap supplied by Mead Packaging.

Initial response to the Ultra-Performer has been favorable. "We're very impressed with the bottle," reported Tom Hiles, executive vice president and general manager of Carolina Canners, Cheraw, SC. "It performs well on our lines and looks great on the shelf."

Carolina, a canning and bottling cooperative, is currently supplying the package to the Pepsi-Cola Bottling Co. of Charlotte, NC.

Glass packaging, which stumbled badly in 1978 and began a modest comeback last year, is also being greatly aided by beer.

Returnable beer bottles, impacted by mandatory deposit laws, showed a 72.3% increase during the first ten months of 1979. Shipments rocketed from 204.6 million units during the first ten months

Metal can shipments
(millions)

		11 mths. 1979	11 mths. 1978	% change
Beer, total		26,623	26,708	- 0.3
three-piece cans		1,603	2,391	-33.0
two-piece cans:	steel	5,261	5,326	- 1.2
	alum.	19,759	18,991	+ 4.0
Soft drinks, total		24,286	23,801	+ 2.0
three-piece cans		7,723	11,335	-31.9
two-piece cans:	steel	5,041	3,735	+35.0
	alum.	11,522	8,731	+32.0

Source: Can Manufacturers Institute

Copyright: Beverage Industry March 14, 1980

Closure shipments
(thousands gross)

	8 mths. 1979	8 mths. 1978	% change
Soft drinks, total	140,083	154,259	- 9
crowns	81,975	90,471	- 9
others	58,108	63,788	- 9
Beer, total	96,804	98,414	- 2
convenience	70,331	67,032	+ 5
conventional	26,473	31,382	-16

Source: Dept. of Commerce

Copyright: Beverage Industry March 14, 1980

Blow-molding capacity for 2-L plastic beverage bottles

	Year-end 1979						Estimated 1980		
	Plants	Types of machines CM	Nissei	Corpoplast	Total machines	Capacity (mil. units)	Production (mil. units)	Operating rate	Potential 1980 market share
Amoco	5	35	2	—	37	537	428	80%	17.2%
Continental Group	11	40	—	—	40	600	428	71	17.2
Owens-Illinois	4	—	—	24	24	480	410	85	16.5
Hoover Universal	7	33	—	—	33	486	394	81	15.8
Dorsey (Sewell)[1]	15	35	12	—	47	597	510	85	20.5
International Bottlers	2	2[2]	10	—	12	72	55	77	2.2
Plastipak	3	—	14	—	14	84	64	76	2.6
Carolina Canners	1	6	—	—	6	90	70	78	2.8
National Can	1	—	4	—	4	24	19	79	0.8
SFB Plastics	1	2[2]	—	—	2	12	10	83	0.4
Beverage Canners	1	—	1	—	1	6	5	83	0.2
AIM Packaging	2	16[2]	—	—	16	96	80	83	3.2
Indian Head (1980)	1	2	—	—	2	30	17	57	0.7
Total	54	171	43	24	238	3,114	2,490	80%	100.0%

1. Sewell has only two plants dedicated to the production of PET bottles; the remaining 13 plants reflect PET bottle equipment in existing manufacturing facilities.
2. Denotes anticipated delivery of the new Cincinnati Milacron CSM 1000, which can manufacture PET bottles up to 2-L in size.

Note: Par-Pak, Diamond International and Wetter Co. are planning to add eight blow-molding machines in early 1980, with productive capacity of approximately 85 million PET bottles — all 2-L.

Source: Morgan Stanley Research Estimates

Copyright: Beverage Industry January 11, 1980

of 1978 to 352.5 million in '79.

Nonreturnable beer bottles jumped from 12.7 billion units shipped during the first ten months of 1978 to 13.6 billion in '79, a 6.8% increase. Within this category, the big winner was 11-15.9 oz. bottles, which registered a 10.7% increase (9.6 billion in '78, 10.7 billion in '79). Sixteen oz. and over was up 4% (641.7 million in '78, 667.6 million in '79) and under 11 oz. was down 7.9% (2.4 billion in '78, 2.2 billion in '79).

Only one soft drink category — 16.0-16.9-oz nonreturnables — contributed to glass's rebound. That group showed a 2.7% gain, inching from 2.0 to 2.1 billion units shipped.

The big losers among nonreturnable soft drink bottles were the 34 oz. and over group (down 56.4% on shipments of 285.3 million units), the under ten oz. group (down 29.2% on shipments of 226.2 million units) and the 17-33.9 oz. group (down 17.2% on shipments of 808.3 million units).

Returnable soft drink bottles showed no change, holding steady on shipments of 729 million units.

Industry analysts agree that most commodity growth will come at the expense of other packaging. On this score, Richard Palm, analyst at Merrill Lynch, Pierce, Fenner & Smith, said, "As glass presses its price advantage and the attractiveness of single-service becomes clearer, I look for glass to take market share from cans."

While trying to stave off glass's push, aluminum and steel are also competing against each other within the can segment.

Aluminum appears to be the winner, at least for the time being. "Long term," Palm said, "the two will continue to be competitive. One won't completely dominate. Short term, aluminum may do better due to mandatory deposit laws and availability."

Stupay agrees. "Aluminum is coming on more strongly," he said.

Last year, metal's growth came almost exclusively in the soft drink segment; beer clearly felt glass's onslaught.

Shipments of two-piece aluminum soft drink cans were up 32% during the first 11 months of 1979. Shipments were 11.5 billion units, compared to 8.7 billion during the same period a year earlier. Two-piece steel soft drink cans registered a 35% gain, from 3.7 to 5.0 million.

Two-piece aluminum beer cans grew 4%, from 19.0 to 19.7 billion; the steel equivalant dropped 1.2% from 5.3 million to 5.2 million.

Three-piece beer and soft drink cans, suffering steady loss of market share, sounded their death knell in 1979. Shipments in the beer segment were down 33%, from 2.4 million to 1.6 million; the soft drink group was off 31.9%, from 11.3 billion to 7.7 billion.

Such statistics prompted one New York analyst, who preferred not to be named, to say, "Three-piece cans are dead."

Stupay predicted three-piece cans will be off the market by 1983.

New cans being offered include Continental's Triple C, a triple-necked container that the company calls "the least cost beverage package," and a double-necked can from Reynolds. The latter company says it expects all of its can-making facilities to have double-necked capacity by early this year.

In plastic packaging, 2-L PET continued its dominance. Soft drink bottles remain the largest market for plastic, with polyester now accounting for about 16% of the total soft drink packaging market. Over 1.5 billion 2-L PET bottles were produced last year and projections are for nearly two billion to be produced in 1980.

"Plastic will just about eliminate glass in the large sizes," Palm said.

Problems do exist, though. A recent report by Wall Street brokerage house Morgan Stanley & Co. predicted a 600 million unit oversupply of 2-L PET bottles in 1980; at the beginning of the year, reports of price shaving, particularly in the Midwest, were rife.

Coupled with the oversupply issue is 1-L PET's disappointing showing. A year ago its future appeared bright, but a slow sales year for soft drinks and glass's comeback have stalled 1-L PET.

"The big question now," Stupay said, "is the outlook for the plastic beverage bottle. The uncertainty relates to 1-L and ½-L. At the moment they're more costly and not priced competitively with glass.

"Also, 2-L has hurt the volume of sales. What's needed is multipacking of the 2-L, and we're now seeing this in the market."

The bottom line for 2-L PET is that, in spite of problems, bottle production is expected to rise 25% in a soft drink market projected to grow only 2-3%.

Consumers' ratings for container attributes, packaging types

Container attributes	% overall[1] importance	Rating of package types[2] Glass	Plastic	Metal	Cardboard
Keeping the beverage inside fresh	74	69	40	32	20
Not affecting the Taste of the beverage	73	81	38	22	26
Not leaking easily	64	70	46	51	14
Being safe to use	61	36	61	26	50
Base (all respondents)	(400)	(400)	(400)	(400)	(400)

1 — Percent who rated attribute "extremely important"
2 — Percent who "agreed completely" that attribute describes package type.
Source: Business Communications Co., Inc.

Copyright: Beverage Industry September 7, 1979

Secondary packaging trends

Multipackaging increases gallon sales, not units

It's a simple matter of arithmetic: if a consumer grabs a 2-L container off a store shelf instead of a six-pack of 16-oz. bottles, as shoppers are doing in increasing numbers these days, then that customer is buying 67.2 ounces rather than 96 ounces of product.

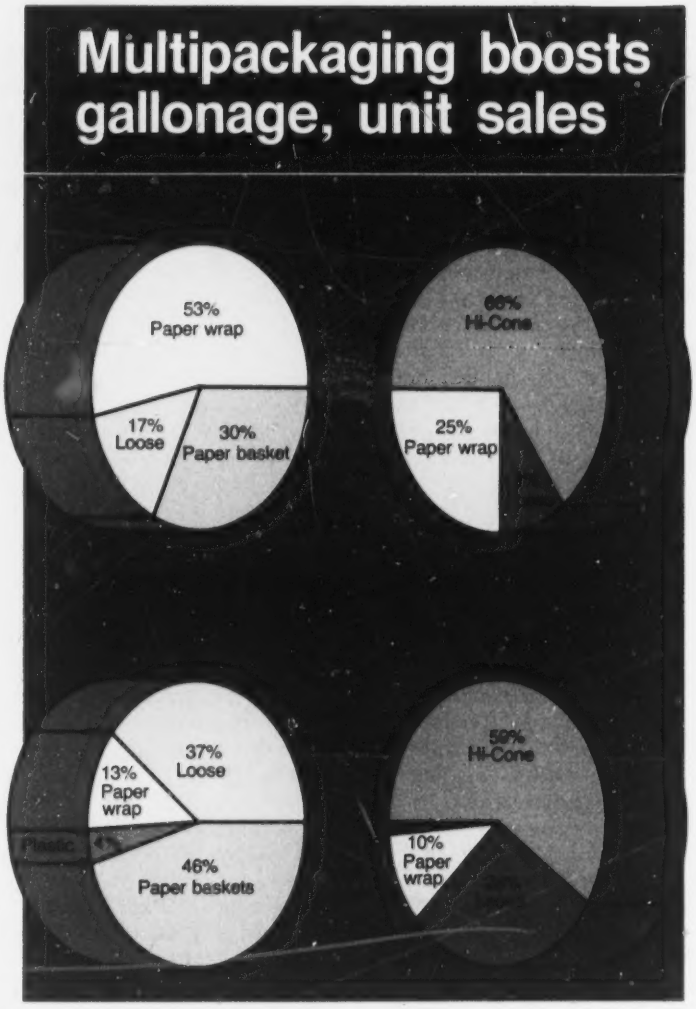
But what if that person, who obviously is looking for a large volume, was also offered a two-pack of 2-L PETs?

That question is increasingly being asked by bottlers throughout the nation as they look to stem a decline in sales volume by increasing their single-purchase gallonage. Now, thanks to the efforts of packaging manufacturers, perhaps they'll be getting some answers.

A **Beverage Industry** survey of secondary packaging suppliers indicates that a growing number of companies are focusing their attention on the development of multiple packages for the plastic bottles that have become so popular in the last two years. And as Mead Packaging's Marketing Chief Maurice Richardson points out, "It's more than just a fad."

Several of the major package suppliers, including Mead, Olinkraft and Zumbiel are offering PET multipacks in some shape or form. In Mead's case, two types are being offered. Its clip-type carrier, available in paper or plastic form, holds two of the containers together by locking under the bottles' support ring. Richardson reports that close to 100 bottlers are presently using the carrier.

The Atlanta-based company has more recently introduced the Cluster Pak, a wrap-around carrier that can hold either two 2-L containers or three 1-L bottles. Richardson says that the package is presently being used by only one bottler.



The C. W. Zumbiel Co. and Olinkraft, Inc. are also marketing multipacks. Zumbiel is offering a clip-type and a basket carrier. By the company's own admission, its Z-Clamp is similar to Mead's clip carrier. According to a company spokesman, the unit is presently in use, but "not to a great extent." The spokesman adds that Zumbiel's other multipack, a basket type, has been more warmly received.

Olinkraft is offering three PET multipacks: a two-pack and a four-pack for 2-L containers; and a six-pack for 1-L bottles.

expanding market

Mead's Richardson is quick to point out the market potential of

the multipacks, citing what he believes are "considerable numbers" of bottlers looking to make the switch to the large packages in the near future. He adds that "large numbers have already switched in the last 90 days."

The market was given a big boost by Pepsi-Cola's selection of the 2-L multipack as one of three "key packages" it intends to promote in 1980. The company will back the package with what one company executive described as a "great new commercial."

some pessimism

However, several of the packaging manufacturers contacted by **Beverage Industry** are not convinced that the 2-L multipack will be effective in boosting sales volume. A spokesman from Owens-Illinois, Inc., whose 16-oz. Plasti-Shield has been a major competitor of the PET in the last few years, said that "at the consumer level, there is a reluctance to pay the combined price" of the 2-L multipack. Spokesmen from other companies reported that the weight of the package will also discourage use.

One persistent problem pointed out by Olinkraft's Doug Kline is that consumers may not be ready for 2-L multipacks. "Customers have a tendency to pull the two packs apart and purchase just one bottle," explains Kline.

To combat that problem, the Hi-Cone division of Illinois Tool works spent a year trying to develop a sturdier multipack. The result: the Hi-Stretch, a 2-L multipack that incorporates both a stretch film and a plastic clip for added package integrity (see **BI**, *12/21/79*, page 1). The film is mechanically stretched around the bodies of the two containers, eliminating the need for heat shrinking. The material is printed in a manner that allows the graphics to be legible after the film is stretched into place.

Completing the package is a polyethylene clip that locks under the neck rings of the bottles. Besides making it more difficult to separate the containers, the clip serves as a handle for greater carrying ease.

According to Dick Rosetti, Hi-Cone's marketing development officer, both Coca-Cola and Pepsi-Cola have approved the use of the Hi-Stretch. "The applicating equipment is going to be completed soon, and we will be placing it with a bottler, but we don't know who yet." Rosetti adds that "we feel very strongly that the machine will eventually be modified to handle 1-L or even .5-L."

larger can packages

While multipackaging for 2-L PETs is getting a lot of attention, bottlers and package manufacturers are not overlooking the sales potential of larger secondary packages for cans. In the past few months, several package manufacturers have come out with 12- and even 24-packs in an effort to help bottlers boost their single-purchase gallonage.

Several industry sources say it is too soon to judge the performance of the larger can packages, but from his vantage point in Cincinnati, Bill Wright of Zumbiel reports that "in the Midwest, the 12-pack has been very popular for beer." As Wright points out, if the past is any indication, soft drink bottlers will likely follow the brewers' lead.

Dick Rosetti says that Hi-Cone was "quite satisfied" with the test market performance of its 12-pack Doubler, a package that utilizes both plastic and paperboard. The cans, arrayed in a 3 by 4 formation, are held in place by the interlocking rings of the familiar Hi-Cone carrier. To keep the tops of the can clean, a printed paperboard cover is secured to the Hi-Cone. For greater carrying convenience, a plastic handle is also incorporated into the package.

Rosetti told **Beverage Industry** that while the Doubler was being test marketed by Chicago Coke, the cardboard tops were applied by hand. However, he added that Hi-Cone is presently working on a mechanical application system.

demand

Several of the packagers contacted by **Beverage Industry** mentioned that while there is a demand for 12- and even 24-can packages, most of it comes from the Midwest.

However, that situation may change as a result of Pepsi's announcement at its bottlers meeting that it intends to promote the 12-pack. As Senior Vice President-Operations Richard E. Glover told the enthusiastic audience, "Three key packages have been selected for emphasis in 1980 — 16-oz. Plasti-

Paperboard reigns, while plastic gains

According to **Beverage Industry** estimates, paperboard materials continued to dominate secondary packaging for bottles, while for cans, the Hi-Cone carrier once again reigned supreme.

In secondary packaging for beer bottles, paper wraps captured 53% of the market. Paper baskets were a distant second with 30%, representing a slight drop from the 1979 figure of 31.6%.

For beer cans, the Hi-Cone lost some ground from the previous year, yet remained the most popular form of secondary packaging with a 66% share of the market. Paper wraps gained slightly with the market share of that packaging type increasing from 23.3% in '79 to 25% this year.

For soft drink bottles, paper baskets held on as the most popular form of secondary packaging with 46% of the market. However, that figure is 8.5% lower then the '79 market share. Paper wraps also lost some ground, dropping from 14.5 to 13%.

The big gainer for soft drink bottles was plastic, reflecting the continuing strong performance of Owens-Illinois' Contour-Pak. Plastic secondary packaging quadrupled its market share for a 4% total.

The ground that paper wraps lost as secondary packaging for bottles was made up for by the increasing use of that package for soft drink cans. The use of wraps increased 5.3% for a market share of 10%.

Judging from figures, paper wraps' gain was Hi-Cone's loss. The market share of the latter package dropped 5% to 59%.

The use of film as a secondary package for soft drink cans remained constant at 3%.

Shield, 2-L multi-pack, and 12-pack cans. . . ."

Glover later added that "we've also got a brand new commercial to support 12-pack cans. We've got two versions — one featuring Mead paperboard, and the other with the Ganz shirnk-wrap version."

other packages

For more traditional types of secondary packaging, 1979 brought an increase in the use of paper wraps. **Beverage Industry** estimates that for beer bottles and cans, the increases were 1.3% and 1.7% respectively. For soft drink cans, the use of wraps jumped an estimated 5.3%.

Bill Wright of Zumbiel says the increase in the use of wraps is "primarily a matter of cost." But Wright points out that while the use of wraps may be cheaper, "it requires more machinery and more floor space." That's why Wright sees a connection between the resurgence of the wrap and the advent of the Contour-Pak. Since the latter package also requires applicating machinery, and thus takes up floor space, the wraps are in effect competitively priced.

The strong performance of the Contour-Pak may explain why soft drink bottles are the only primary packages that are being put into wraps less frequently. While the use of wraps for that package decreased 1.5%, the use of plastic jumped 3%.

A separate figure for the Contour-Pak was not calculated, but a spokesman from O-I reports that the carrier "is selling even better than it ever did and even better than we expected. We expect this growth to continue."

Several packaging suppliers, including Olinkraft, told **Beverage Industry** that they are working on carriers that could be used by bottlers as alternatives to the Contour-Pak. According to Doug Kline, "visibility of the bottles" is the prime consideration. For that reason, says Kline, the alternative packages will likely be wraps rather than cartons.

paperboard standards

Overall, as Kline points out, "paperboard is still by far and above the major packaging item, and will remian so to at least '83 or '84." Perhaps for that reason, the NSDA has recently drafted voluntary standards for secondary paperboard and corrugated packages used for nonreturnable glass containers.

Virtually all the packagers contacted by **Beverage Industry** reported that the standards will not disrupt their operations, nor force them to change their packages at all. As one pointed out, "Paperboard packagers may have set their own standards higher than these (the NSDA's), so it might actually be a reduction in what they have to comply with."

Packaging suppliers agree that no matter what type of secondary package a bottler is using, he'll very likely be paying more for it in the year ahead. According to a spokesman from one major supplier of plastic packaging, "We're gonna see a price rise every quarter this year."

However, the majority of packaging manufacturers expect the prices to rise at a slower rate than the Consumer Price Index, though they're not certain about what that rate will be.

Bottlers finding plastic cases, carriers durable, safe, stable

Bottlers from Maine to California converting to plastic carriers and cases cite the durability, safety, stability, cleanliness and retail appeal as prime reasons for the change.

Those observations surfaced in **Beverage Industry's** survey of bottlers using plastic cases and carriers. Bottlers also offered some key ideas on choosing the right case, including evaluation of existing stocks of bottles, cases and carriers (and projections for the future); giving attention to regional weather patterns; and taking enough time to make a selection.

As an example of how weather is a consideration, Herman Judah of Coca-Cola Bottling Co. of Dothan, AL noted the heat and humidity of southern Alabama summers and said, "We had a real hard time with paperboard when it was wet. It would collapse and cause a real mess. Safety was our prime reason for changing to plastic."

The effect of the Los Angeles rainy season on fiber cases stores two pallets high outside concerned Al Pixley, vice president for operations at Dr Pepper there. "Stacks of empty bottles fell over when the saturated fiber would collapse; the labor that's lost carting debris and cleaning up, and the glass that's lost was too much."

Bottle deposit laws are another consideration. Ted Faddoul, production manager for Royal Crown Cola in Los Angeles sees the possibility of a deposit law in California. He thinks that moving now to plastic cases for some bottle sizes "will aid our flexibility to adapt tremendously.

Careful research of stock cases and his projections for bottle demand led Faddoul to a custom-designed case from a major manufacturer. He sees the 16-oz. bottle as a dying package in Southern California and he expects 28- to 32-oz. bottles to overtake and replace the smaller size. His case is convertible between the 16-oz. and 28- to 32-oz. bottles.

Pixley also went for custom designing. In addition to adapting to an odd, 34-in. by 44-in. pallet size, Pixley had a special bottom developed which fits with their ties for secure palletizing. The bottom locks down on the crowns of the bottles in such a way that the crowns nestle in a depression-like shape molded into the case. The pallet locks together without deforming the soft aluminum closure.

The experience of John Tiernan, president of the Coca-Cola Bottling Co. of Presque Isle, ME differed from that of the California bottlers as much as the geographic distance between them. Maine's deposit law mandates returnables, so Tiernan went to refillables. Perceiving weight problems with wood, he chose plastic cases. Unable to gather information about the cases on the market, he said, Tiernan chose his cases "strictly on the basis of price." He finds that the taller, "Japanese" style 500 ml. bottles fit too tightly in a 16-oz. case for his uncaser. He has since hired an ex-

Post-mix: entering 80's with momentum

After outpacing total industry growth for most of the last decade, soft drink's fountain market enters the 1980's with noticeable momentum.

Like a long-distance runner, fountain has gained ground by running a steady, eyes-ahead race. If its growth has been unspectacular, it has been solid.

During the ten years from 1968 to 1978, bulk sales rose from 15.5 to 22% of the U.S. soft drink market. For seven of those years fountain and its dominant star – post-mix – grew faster than the industry. What's more, industry consensus is that post-mix will continue to increase its piece of the pie.

Profitability is hard to pinpoint, though it is generally accepted that at the parent company and retail levels, at least, profits are high.

Trends are easier to discern. Most industry insiders agree post-mix will continue to beat the industry's growth rate. They predict it will blaze new paths – into the family home and neighborhood supermarket, for instance. And they say new products, like post-mix iced tea, may grab significant shares of the market.

Said Tim Griffith, analyst at Merrill Lynch, Pierce, Fenner & Smith: "Package vend is not a growth area. Neither is cup vend. Fountain is, and it will grow faster than the industry."

National Soft Drink Assn. figures show bulk sales' double-digit growth pacing the industry in 1977 and '78. Bulk sales grew 12.9% in '77 while the industry showed a 10% gain; in '78 bulk was up 12.3%, the industry 7.5%.

Such success was halted last year. **Beverage Industry** estimates

Vending	13.6%	13.4%	12.9%
Dispensing	86.4	86.5	87.1
Fast food outlets[1]	45.0	45.2	46.0
Independents	18.0	15.5	13.0
Others[2]	37.0	39.3	41.0

fountain sales grew 7.5% in 1979, to 1.9 billion gallons with a total wholesale value of $3 billion. The slower growth rate reflects a projected decrease in fast food sales caused by the gasoline crisis early in the year.

"The second quarter of 1979 was the worst of the decade," reported Jeff Weingarten, analyst at Goldman Sachs. "To some extent this will be alleviated in 1980 and growth will come after that."

How much growth? Certainly not equal to the booming 1960's, when the proliferation of fast food restaurants from Maine to California provided a nice coattail for post-mix to ride. Steady growth, though, is predicted.

"In the 1960's," remembered Sanford C. Bernstein analyst Manny Goldman, "the fast food industry grew in phenomonal proportions. We won't see that again. But while the market won't grow at the rate it did in the old days, it has a very nice future."

fast food sales

Representing nearly half of all fountain sales, fast food restaurants are closely linked to post-mix's future. The relationship is mutually beneficial. Sources say soft drinks account for as much as one-third of fast food outlets' profits.

So, the soft drink industry is banking on continued increases in the percentage of meals Americans eat away from home. Indications – in spite of an off year in 1979 – are that the trend will continue.

"The figures generally quoted," Griffith said, "are that a third of the dollar volume of food consumed is consumed away from home, and that it may go to 50%.

"I don't think you'll see a change in the trend of increased away-from-home (food) consumption. So everybody's zeroing in on the fast food chains. They are the growth."

Pepsi-Cola Co.'s 1978 acquisition of the Pizza Hut and Taco Bell chains underscore this point. It also represents Pepsi's attempt to increase its share of fountain sales. The Coca-Cola Co., undisputed king of the jungle here, currently holds a 46% to 15% lead over Pepsi in fountain sales, according to BI sources.

While Coke is watching Pepsi

and Pepsi is watching Coke, everybody is watching the gasoline pumps. They could play a starring role in the story of away-from-home eating. Continued price increases by the Organization of Petroleum exporting Countries and the ongoing revolution in oil-rich Iran paint a bleak picture. One thing is certain — if gas is plentiful in the 1980's it will continue to be more and more expensive.

Will this force Americans to keep their cars parked in the garage? Anthony Rebello, for one, thinks not.

"Eating away from home," said The Seven-Up Co.'s director of retail sales, "is a lifestyle consideration more than an economics consideration. People *will* pay more for gas. They will continue to eat away from home if they can at all afford it. The big question is whether soft drinks can grow with the foodservice industry, and I think they can."

Coke's vice president of fountain sales, Herbert Arnold, agrees. "I think the future will be great," he said. "From our standpoint we have a huge capital investment in it."

Arnold said post-mix currently constitutes 33% of Coke USA's sales and that it could reach 50%.

home dispensing

If Americans do decide to stay home they may dispense post-mix soft drinks from their own home units. Many see this as *the* untapped market and the wave of the future.

"There is unmistakeably a future for it," 7Up's Rebello said. "And there is an industry consensus that it will happen. Like the toaster, the electric blender and the microwave oven, it's logical to assume the soft drink dispenser will work its way into the home."

"The future is not in doubt," echoed Arthur Scott, president of National Servit, an early entrant in the home market. "We either devote half the supermarket to soft drinks or find an alternative. It will be impossible to put the soft drink needs of the American public on the supermarket shelf."

Servit's home carbonating sys tem, distributed in 18 states, retails for about $800. Robert Whorton, president of competitor Carbonated Systems, said manufacturers will have to get the retail cost down to "$350 or less" to secure home dispensing's future.

"We feel it will take a revolution in equipment," he said. "You'll need low-cost equipment to make an impact. Until then it will continue to be a small percentage of the market."

Many in the industry say the home dispensing market is five to ten years away from maturing and Whorton predicts it may eventually command 10% of home consumption of soft drinks.

Gains in home dispensing — it is estimated that 10,000 units have been installed in the U.S. — point to post-mix's technological advances. Industry spokesmen say the market and its accoutrements will continue to become more sophisticated in the 1980's and beyond.

new offerings

New post-mix products, especially iced tea, have already made their presence felt. Lipton, Thirs-Tea, Nestea, Hurty Pack, V&E Kohnstamm and Wylers are among those aggressively pursuing the spoils of the iced tea market. Coke USA and Pepsi are reportedly developing their own post-mix iced tea.

"We've showed increases every year since the product was introduced four years ago," reported James E. Doherty, executive vice president of Hurty Peck. "And there's no question that we've just scratched the surface. The potential is unlimited."

Fred Thimme, Lipton's product manager, is equally optimistic about the market. "Within five years," he said, "I think post-mix tea has a real shot at being the second post-mix beverage after cola. It's going to be a big business. We think it will outdo the canned tea business."

Lipton's figures put the amount of iced tea consumed away from home at 200 million gallons annually. "This," according to Thimme, "is potentially all post-mix iced tea."

Interest in the product — evidenced at the recent NSDA convention and exposition in Dallas — continues to grow.

Post-mix's bottom line may have been hit by industry consultant Leroy Gerdlund. "This is the way the industry is going," he said. "In ten to 15 years I think post-mix will be the major method of selling a soft drink to the customer — be it in a restaurant, the home or wherever."

Many in the industry would argue with Gerdlund's assessment. Few would argue that post-mix, long considered the industry's country cousin, has come of age.

In 1978, more than one of every five soft drinks consumed was a post-mix product. That number continues to inch its way up in 1980 and beyond.

Expansion plans

Expansion goes on despite sales woes

In spite of the easing of both soft drink and beer sales, in 1979, there is no sign that this has caused any reduction in planned new plant and capital expenditures in 1980.

The soft drink industry is projected to spend $258.1 million on new equipment and plant facilities this year. Breweries will be spending in the neighborhood of $306.5 million.

(Both figures are **Beverage Industry** estimates based on surveys and on supplier and plant personnel interviews.)

Fueling this record amount for soft drink producers are a number of factors:

- The shift to 1- and 2-L PET bottles and single-service glass;
- The need for energy conserving production; and
- Continuing consolidation from multi-plant to central production.

Brewery expenditures are being fired by:

- Heightened competition among the Big Five firms;
- Escalating transportation costs incurred as a result of shipping product long distances from production sites to distributors, and
- Greater in-plant capacities to fill product diversification marketing plans.

What could put a crunch in expenditures for both industries is the uncertain economic conditions.

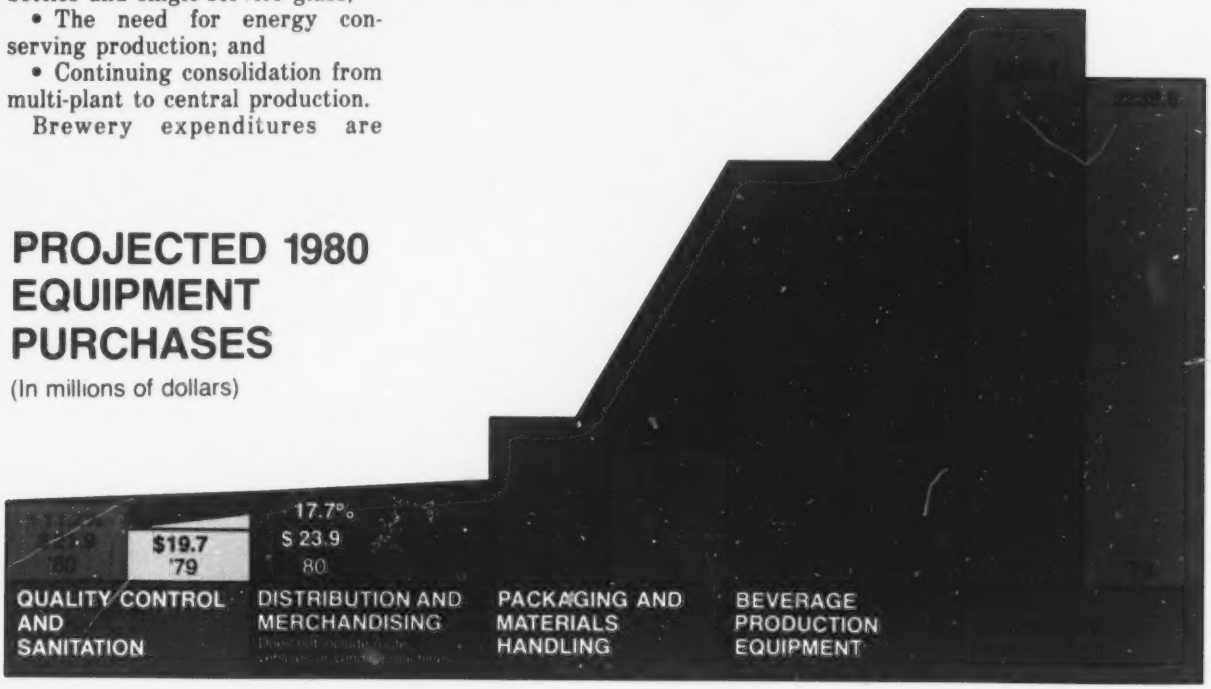
Many soft drink firms are dependent on local money sources to finance their expansions. Should these dry up and interest rates increase, curtailments may be necessary. Last year, an estimated 15% cutback in expenditures was the result of these circumstances.

soft drinks

For equipment, soft drink producers have budgeted an estimated $258.1 million in 1980. The lion's share, 60%, goes for production equipment.

Packaging and materials handling machinery is next on the bottlers shopping list with an estimated $59 million in expenditures slated for this area.

Distribution and merchandising equipment expenditures are up



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17.7% and should almost reach $24 million this year.

This figure presents some surprises for most industry executives since a large part of it is for local market support. Considering that many franchise companies have announced reductions in co-op funds for these uses, it could have been anticipated that these expenditures would drop.

"Perhaps this increase indicates bottlers are convinced of the need for this type of support and are determined to continue it," commented a top executive in a firm which supplies almost one-third of the industry POP materials.

Anticipating increased needs for quality control and in-plant sanitation, soft drink firms are earmarking 11.2% more funds to these items in 1980.

An estimated 65 new lines, approximately 20 of them, for cans, will be constructed in 1980. An additional 45 will be revamped — upgraded primarily as to speed or package capability . . . for a total of 110 new soft drink lines.

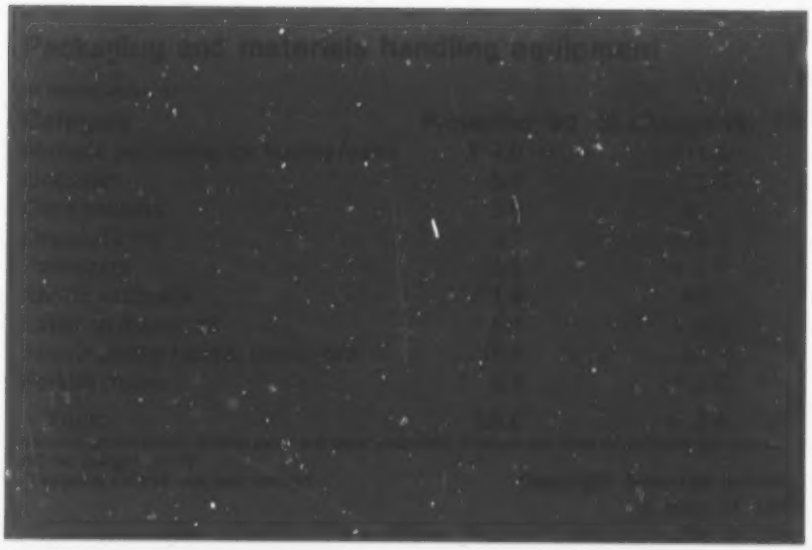
Some 45 of these lines will have the capability of producing 2-L PET bottles, primarily in the 200-300 bpm range. The number is up more than 10% over 1979. Many of these lines, however, will have capability of producing other sizes, including Plasti-Shield 10- through 16-oz. sizes.

In addition to the new and revamped line expansions, a number of soft drink firms are also planning on adding new bottle cleaners in anticipation of increasing (or returning to) returnable bottle production.

In the soft drink industry, suppliers reported that in excess of 80 new bottle cleaners would be installed in 1980.

Producers are not only concerned over the possibly of mandatory deposit legislation, but also they are interested in the economic advantages of returnables during a time of economic downturn. Other items affecting the increased acquisition of cleaners: improved methods of label removal, less energy-intensive systems, heat reclamation, reuse/reclamation of liquid solutions.

These energy conserving features are also paramount in



Distribution and merchandising equipment purchases

(in millions of dollars)

Category	Projected '80	% change vs. '79
Truckloading equipment[2]	$ 2.4	+ 9.1
Hand trucks	1.6	NC
Display racks	7.1[3]	+ 5.9
Uniforms	3.5	NC
Accounting and data processing	9.3	+29.2
Total	$23.9[4]	+17.7

[1]Does not include route vehicles, forklift trucks or vending equipment
[2]Includes automated in-truck equipment, ramps, etc.
[3]Includes POP materials, clocks, scoreboards, signs, etc.
NC = No change from previous year
[4]Dollar amounts have been rounded

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planned purchases of proportioning equipment. Almost 50% of the new lines scheduled for this year are being planned with this feature in mind.

According to the results of a study compiled by one major manufacturer, the bulk of the new and replacement lines are scheduled for the Midwest (a change from previous surveys when the South and Southwest were the hotbeds of plant expansion.)

breweries

Security analysts are projecting that Anheuser-Busch will increase capacity by about 10% in 1980, to around 50 million barrels per year. Miller, they say, will boost capacity by as much as 27% and could conceivably be able to produce about the same amount by the end of the year.

These two are accounting for the bulk — some sources say more than 90% — of the total expenditures projected for 1980 for this industry.

Of the total $306.5 million projected for this industry, more than 65%, $200 million, will go for beverage production and malting equipment. Approximately $70 million will be spent on packaging and material handling equipment. The remainder, $36 million, has been earmarked for "other" expenditures.

Some 40 new bottling lines are on the drawing board for this year — almost 60% are for upgrading. The remainder will be new lines. Three-fourths of the 12 canning lines being planned will be new.

Virtually all of the reworked bottling lines are slated to have higher speeds. (One supplier reported that he had experienced slight interest in new quart bottling lines, but this executive did not feel that his findings were indicative of a "total industry" interest in this size.)

Targeted speeds for the new beer lines are primarily in the 1200 bpm range. (Although several new lines will attempt to bring production up to the 1500 bpm speed.)

In addition to increasing the speed of existing lines, a number of brewers are also planning to add returnable bottle capability to the lines. Bottle cleaner sales to the industry are reportedly going to be 50% higher than in the previous year.

1980 and beyond

Although the continued increases in plant expenditures for the soft drink and beer industries are records, it should be noted that reliable data in this area is becoming more and more difficult to obtain. This, it is believed, is due in large part to the competitive nature of the two industries.

The 7.7% increase in dollar expenditures for soft drink producers, for example, could normally be interpreted as a static demand situation with inflationary pressures built in. **Beverage Industry** — and the supplier sources it contacted — does not feel this is necessarily true.

Actually orders-in-hand do indicate an unusual amount of new and replacement business being planned for 1980.

As for the future, all of our sources were optimistic that soft drink firms and breweries would continue to build and to modernize their facilities — even if the dynamic sales increases of the past decade can't be duplicated.

Equipment and technological advances — wedded to increased labor costs — mandate these changes, they contend.

One bright spot they all pointed to was increased need for more sophisticated production monitoring and management data generation equipment.

Beverage production equipment purchases

Category	Projected '80	% change vs. '79
Bottle cleaners	$ 39.4	+12.9
Bottle and can rinsers	4.2	+ 7.6
Bottle/can fillers	43.6	+ 1.9
Proportioning/carbonating/ cooling equipment	20.9	+13.6
Cappers	6.6	+ 3.0
Decorators	3.5	+ 6.1
Canned parts	8.7	+12.9
Refrigeration equipment	1.6	+18.8
Post-/pre-mix equipment	4.7	+ 9.3
Boilers and heaters	6.7	+ 5.5
Syrup and sweetener mixing systems & storage equipment	8.7	+11.5
Others*	5.3	−10.3
Total	$153.3*	+ 7.4

*Includes sound/noise control devices, can and bottle warmers, case washers, other unspecified equipment.
*Categories and totals have been rounded

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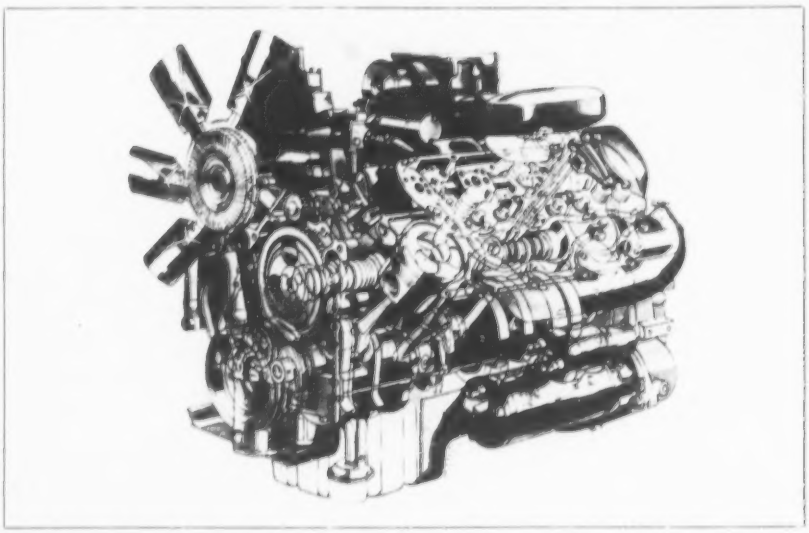
Diesels: which to use where

Selection of the proper components for a new truck at purchase time has the most important effect on how the vehicle will perform for its owner and whether it will earn its keep or lose money.

The truck built up with the wrong components will never make its owner happy no matter how carefully it is driven, loaded and serviced, no matter how nice it looks, nor how much it brings at trade-in time.

Of all component choices, none is more important than the selection of the proper engine. And engine selection has become all the more difficult over the last few years as the number of power plants useful in beverage hauling has proliferated.

Here are some pointers on how to make the engine choice which is right for your hauling needs. The expression "for your hauling needs" is important. In the end, each truck purchaser must take the time to find the engine that is right for his needs. The way trucks are actually to be used dictates the power plant that is best.



A look inside the new 8.2-liter diesel engine from Detroit Diesel Allison: getting all the parts moving on a cold morning is a problem, but there are ways to ease the job.

gas or diesel?

Proper engine selection really boils down to a number of specific questions. The first is: should it be a gas engine or a diesel power plant?

Books have been written on the subject. In the final analysis, the purchase decision comes down to a second question: will the fuel efficiency of the diesel reduce fuel bills enough to cover the extra cost of the diesel engine, or at least most of it?

Assuming that most beverage haulers have been running gas powered beverage trucks, it is well known what their fuel bills come to. If one were to borrow a diesel powered beverage truck from a dealership or another firm in the same line, run it for a few days on the routes in question, then it could be seen what the diesel truck's fuel costs are. (If such a truck can't be borrowed, fuel consumption figures from a beverage hauler who is using diesel trucks will be helpful, as long as that source has a similar operation.)

Once fuel cost figures on both types of power are compared, it can be seen how much is likely to be saved by using diesel power through the complete life of a truck. If the saving doesn't cover, or just about covers, the $3,000 to $8,000 extra usually paid for a diesel engine, selection of that type of power will probably be a losing proposition.

Rules of thumb differ on just how many miles a truck has to be driven each year to produce the kind of savings that will justify selection of diesel power. That's because operating conditions vary widely from one truck fleet to another.

Diesel power is unlikely to pay its way in trucks which run less than 10,000 miles a year. It is almost sure to make economic sense above 25,000 miles a year.

(However, diesel fuel savings do not necessarily have to cover all of the extra cost of the engine to make the purchase of a diesel worthwhile. These engines produce other savings that can help justify their use. Routine maintenance is reduced, since there are no routine electrical tuneups, and less of the truck and the driver's time are lost in fueling, two examples of other savings that make the diesel economically attractive.)

If a diesel engine turns out to be the proper choice, the next question is: which one of the hundreds of diesel engine models now on the market should be purchased?

Diesels now available in trucks divide into two classes: big bore and midrange.

Typically rated from 250 to 500 horsepower or more, big bore diesels are designed for punishing, long distance service. They are big and durable and they are designed to be extensively rebuilt in order to further extend their lives.

Big bore engines are for trucks with gross vehicle weight (GVW) ratings way up in the heaviest class, usually with GVW ratings well above 33,000 pounds. They do their best job in trucks which are run more than 50,000 miles a year.

Cummins Engine, Caterpillar Tractor and Detroit Diesel Allison make big bore diesels available in many American truck lines. Mack Trucks produces most of the big diesels for its own trucks. International Harvester makes some of its own and installs more from the other U.S. engine manufacturers.

In a few words, big bore diesels are what most people were talking about when they discussed big

commercial trucks until recently. U.S. manufacturers and operators really led the way in developing this type of truck and engine, with the vast distances to be covered in this nation getting some of the credit. Even the European truck makers admit that the U.S. leads the world in development of long distance, heavy trucks with big bore diesel power.

This type of truck is not widely used in beverage hauling, although it can be ideal for over-the-road movement of wholesale loads.

A midrange diesel is the type of engine which has enjoyed dramatic growth in the beverage field in the last couple of years. It is tailored to deliver fuel efficiency in a truck which is a cut below the heaviest, say in the 18,000 to 40,000 pound range on the gross weight scale. A midranger shines when it is run in the area of 20,000 to 35,000 miles a year. In short, a midranger can be just right in route delivery work in the beverage field.

The selection of midrange diesel engines available is staggering. Caterpillar is now featuring the 3208, a V-8 engine available in several versions; Cummins is renewing its efforts in the midrange field with the VT-225, a six-cyclinder engine; Detroit Diesel has just unveiled brand new 8.2-L V-8s; and International Harvester has recently introduced 9.0-L midrangers. All offer other engines which fall in the mid-range class.

All four imported midsized truck lines available in the U.S. – Iveco's Magirus trucks, Mack Mid-Liner models, Mercedes-Benz and Volvo – have nothing but diesel power. More than one made-in-Europe power plant is offered by each line.

compression options

Most diesels available to U.S. truck operators offer a choice of naturally aspirated and turbocharged versions, bringing up a special truck component choice.

A turbocharger is an extra-cost accessory which packs more air into each cylinder during the compression cycle. That can be seen as delivering more power from a given amount of fuel or using less fuel to get a given amount of power. Since turbochargers also help curb engine noise and undesirable exhausts, they are growing in popularity. In fact, despite their extra cost, turbochargers are expected by many to be used on just about all U.S. truck diesels before too long.

The amount of horsepower needed is the key determining factor on which engine of any type should be used in a given truck. If provided with reasonably accurate information on the weight of a truck and its load, frontal area (front height multiplied by front width) and the road or street grades to be encountered, a good salesman or anyone else with just a little experience can use the charts provided by truck companies to show just how much horsepower is needed in any given situation.

Horsepower requirements are not a matter of choice for truck operators. If the calculation says your truck needs 225 horsepower, it will pay to select a power plant that turns out something very close to 225 horsepower. Go for a 250-horsepower engine and the cost will be higher, the engine will use extra fuel, have excess weight and give some temptation to drivers to use the extra power for speeding. Go for a 200 horsepower engine and there is likely to be no important fuel saving, although the purchase price may be a little lower. However, the engine which does not have enough power for its work is likely to break down prematurely and is almost sure to draw the wrath of drivers who don't have the performance they need on the job.

A number of sophistications can be worked into the engine selection process once the basic horsepower calculation is made. This is the time, for instance, to consider whether to go for an engine which is turbocharged. Getting to the required horsepower level by specifying a turbocharged, but smaller, diesel makes a lot more economic sense than going for a bigger, naturally aspirated engine

Fuel and maintenance savings over five years: gas vs. diesel

	Fuel			Maintenance		
	Gas	Diesel	Savings	Gas	Diesel	Savings
First year ($1.00/gal.)	4,444 gal. = $4,444	2,222 gal. = $2,222	$ 2,222	.0792¢/mile = $1,584	.0547¢/mile = $1,094	$ 490
Second year ($1.10/gal.)	4,444 gal. = $4,888	2,222 gal. = $2,444	$ 2,444	.1260¢/mile = $2,520	.0496¢/mile = $ 992	$1,528
Third year ($1.21/gal.)	4,444 gal. = $5,377	2,222 gal. = $2,689	$ 2,688	.1430¢/mile = $2,860	.0676¢/mile = $1,352	$1,508
Fourth year ($1.33/gal.)	4,444 gal. = $5,911	2,222 gal. = $2,955	$ 2,956	.1625¢/mile = $3,250	.0740¢/mile = $1,480	$1,770
Fifth year ($1.46/gal.)	4,444 gal. = $6,488	2,222 gal. = $3,244	$ 3,244	.1795¢/mile = $3,590	.1043¢/mile = $2,086	$1,504
Five year savings			$13,554			$6,800

Source: Iveco Trucks of North America, Inc.: "Magirus Diesel vs. Gasoline".

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Beverage Industry

that is sure to use more fuel.

The experienced truck salesman can work in some other sophisticated considerations. The thin air of higher altitudes cuts a diesel's power output. If altitude is a problem, the salesman will advise that an extra strong engine is needed. The same thing can be said for extra torque if trucks need extra starting power to get moving uphill when fully loaded. And, a good salesman can point out how to select the right transmission so the engine operates at its most efficient speed.

Finally, there is an engine selection area in which the operator has a great deal of choice. While big bore diesel engines are designed for long life with extensive overhauling and rebuilding over the years, midrange diesels have varying potential in this area.

Those who expect a truck and its diesel to go many miles through many years with major and expensive overhauls along the way will do best with the most sophisticated and most expensive midrange diesels that are designed for such elaborate repairs.

Operators who want to use engines over fewer miles for shorter periods can go for diesels with limited potential for extensive rebuilding. Obviously, these engines cost less.

In the midrange diesel field, short means about 100,000 miles of driving to trade-in after five years of use. Long is about 400,000 miles of use over ten years. However, these figures are extremes which probably apply to no one operation in the real world. The point is:

Analyze your plans for the use of a truck and its engine. Check on the long-life and rebuilding characteristics of engines that have the horsepower needed to do your work. Then go for the engine that has the characteristics that match your hauling plans and desires.

Diesels: power plants of the future

Slow but steady changes in the diesel engine, most of them for the better; a drift toward the near-disappearance of the gas truck engine; and very little in the way of new sources of power.

That, in a few words, is what the experts see in the near future for the engines which power the beverage industry's trucks.

A major change in the diesel is already well under way and has been mentioned in these truck reports several times in the past. There is wide agreement that the day is in sight when almost all truck diesels will be equipped with turbochargers.

Turbochargers are accessories which are attached to engines to pack extra air into each cylinder during the compression cycle. That extra air gets more power out of the fuel which is injected just before ignition.

The devices do cost extra and add some complexity and potential service problems under the hood. However, they are winning the favor of a growing number of operators who feel that they more than pay for themselves by reducing fuel consumption or (looking at it another way) increasing the load which can be moved with a given amount of fuel.

Government regulations could easily have more to do with the future of truck engines than any other factor. Turbochargers shine in this area, too. They help both in suppressing engine noise and in controlling exhaust emissions. The day may come soon that turbochargers will be required on almost all diesel engines to meet exhaust and noise rules. And their fuel saving would then be viewed as a plus benefit (and one that is mighty important in this fuel-short era).

This is the latest and lightest diesel truck offering in the U.S. by Mercedes-Benz. It has a gross vehicle weight rating of 22,000 lbs.

Turbochargers or superchargers are not unknown in the gasoline engine field. In fact, they have had a recent upsurge in popularity in the automobile business. There has been little talk of turbocharging gas engines for trucks but that could change.

Better than 90% of U.S. heavy trucks (gross weight ratings above 33,000 lbs.) now have diesel engines. And, use of diesels in trucks with gross weight ratings in the 19,000-to 33,000-lbs. area is increasing by leaps and bounds. Route delivery trucks used in the beverage industry are a prime example.

diesel target

Since there are a limited number of diesels in automobiles, light and medium trucks, these lighter duty vehicles are seen as the next prime growth area for diesels. There are few students of automotive vehicles who do not see diesel use growing dramatically in

Powder companies look to strengthen sales punch

Has the punch gone out of the powdered beverage business? Or, will ready-to-drink bottler-produced versions supply the new product push that the industry apparently needs?

1979 was not a good year. After five years of better than average sales increases, powdered beverage sales stagnated. With a 1.1 billion gallon consumption figure, the products had a 1% sales decline.

To industry officials, the gallonage decline presented a number of questions. Not the least of which was: "Why in an inflationary period did the most economic beverage have a sales decline?"

Even more perplexing: "Why did the most economic of these beverages — the unsweetened powders — show a decline greater than the others?"

One answer might lie in dissecting the winners and losers among this group. Country Time was up 18% and presweetened Hawaiian Punch was up 8.3%. Both these brands introduced ready-to-drink versions in '79. They are being produced by soft drink bottlers and contract packers.

synergistic trend

It is the view of executives at these firms that the existence of the liquid version resulted in more consumers being exposed to the product. As a result, they were more likely to purchase the powdered version of the brand.

Gambling on the validity of that premise, Wyler's, which has been losing market share for the last five years, debuted its ready-to-drink version this spring in Wisconsin: Canada Dry/Graf's, an early purveyor of Grandma Graf's powders, is introducing the new version — lemonade and fruit punch were recently brought out in cans.

According to Arthur W. Hallett, director-sales/marketing for Wyler's division of Borden Foods points out that the new version is vitamin C enriched. Field tests show that consumers prefer the fortification, he said.

The other gainer in the category was Minute Maid Crystals with a 6.7% increase. Here too, product marketers feel the tie-in with a ready-to-drink product has made a difference.

"Consumers were presold on the brand due to the quality image of our orange juice," comments Gene Amorosa, senior vp-marketing at Coke's Foods Div., Houston. He also feels that the product formulation is a big advantage. It is the only powdered drink with natural fruit juice.

Hi-C, of course, proves the exception to the rule. A ready-to-drink version has been around for sometime and apparently has a proven consumer base.

Industry officials feel that Hi-C simply bore the brunt of what is a very competitive market. That competition was the reason Pillsbury pulled out of the business.

Funny Face and Squoze were sold to Brady Enterprises, marketers of Bartenders mixes. Sam Brady, marketing director, is very bullish on the new brands. They will be reintroduced, he says.

Borden's Prize was another casualty of the competitive wars.

impact of 2-L

Another reason for the stagnated market is suggested by John C. Maxwell, **Beverage Industry's** director of research and statistics. He feels that the "bargains" available in the highly-promoted 2-L plastic bottle played a role in the trade-offs which normally occur when consumers shift from one beverage type to another.

"Price is part of the attraction these powders have," he says. "When a consumer can buy a cola at what is a preceived cheap price, she won't be tempted to serve the more economical powders."

Additionally some of the powders no longer have a marked economic advantage. Per-ounce prices have inched up as producers contended with rising ingredient (sugar) and packaging costs.

Those cost increases spurred across-the-board price rises to boost total dollar volume of powders to $562 million, up 6%.

Maxwell also feels that the lack of new entries adversely affected sales. "These generally create more activity among these established brands and they also attract new users," he comments.

breakfast powders

The instant breakfast market posted a modest gain of .2% in '79. General Foods' Tang and Start were flat, although Tang continued to lead the breakfast segment. Borden's Instant Breakfast continued its descent, dropping 20% for the year.

Private labels posted the only increase, rising 13.6%.

The institutional market segment dropped .8% but held 29.6% of the total market. Standard Brands and Cramore posted the

Retail volume of powdered drink mixes

(mil. gal. finished beverage equivalents)

	1975	% of market	1976	% of market	1977	% of market	1978	% of market	1979	% of market	Change 1978/79
General Foods											
Kool-Aid*	448.9	54.3%	473.3	52.0%	508.0	48.3%	506.0	45.5%	491.4	44.7%	(2.9)%
Kool-Aid†	140.9	17.0	141.0	15.1	151.0	14.4	149.6	13.5	153.4	13.9	2.5
Country Time	—	—	39.0	2.0	50.0	4.8	61.7	5.5	72.8	6.6	18.0
Total	589.8	71.3	653.3	69.1	709.0	67.5	717.3	64.5	717.6	65.2	—
R. J. Reynolds											
Hawaiian Punch*	—	—	—	—	—	—	52.3	4.7	50.5	4.6	(3.4)
Hawaiian Punch†	—	—	65.6	6.0	75.0	7.1	53.9	4.8	58.4	5.3	8.3
Total	—	—	65.6	6.0	75.0	7.1	106.2	9.5	108.9	9.9	2.5
Borden											
Wyler	130.9	15.8	114.4	12.2	105.0	10.0	76.2	6.9	73.5	6.7	(3.5)
Borden Prize	—	—	17.5	1.8	13.0	1.2	5.5	0.5	—	—	—
Total	130.9	15.8	132.0	14.0	118.0	11.2	81.7	7.4	73.5	6.7	(10.0)
Coca-Cola											
Hi-C	—	—	—	—	—	—	46.7	4.2	44.4	4.0	(4.9)
Minute Maid	—	—	—	—	—	—	34.3	3.1	36.6	3.3	6.7
Total	—	—	—	—	—	—	81.0	7.3	81.0	7.3	—
Pillsbury											
Funny Face	47.2	5.7	39.0	4.5	24.0	2.3	16.9	1.5	—	—	—
Squoze	—	—	18.5	1.9	14.0	1.3	2.5	0.2	—	—	—
Total	47.2	5.7	57.5	6.4	38.0	3.6	19.4	1.7	—	—	—
Private labels & others	59.1	7.2	73.7	4.5	110.7	10.6	106.4	9.6	120.0	10.9	12.8
Total volume	**827.0**	**100.0%**	**982.0**	**100.0%**	**1,050.7**	**100.0%**	**1,112.0**	**100.0%**	**1,101.0**	**100.0%**	**(1.0)**
Total sales ($ mil.)	**$420**		**$480**		**$500**		**$530**		**$562**		**6.0 %**

* Unsweetened
† Presweetened

Source: Lehman Brothers Kuhn Loeb Research

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only volume gains in this area, advancing 3.2% and 16.7% respectively.

new sweetener

Until recently, formulators of powdered beverages who wanted to bring out a presweetened version had only one choice of sweetener: granulated sugar. With the announcement by Hoffman La-Roche that it intends to begin domestic production of a crystalline high-fructose, they have an alternative.

The only thing that it won't be is cheaper. Pure crystalline HFCS is intended for use in specialty powders, dietetic or reduced caloric versions. According to Ajit Kothari, marketing manager for crystalline HFCS, the product can be used by itself or in combination with saccharin or other natural sweeteners.

At current sugar prices (around

	1974	1975	1976	1977	1978	1979	Change 1978/79
General Foods							
Tang	62.0	56.6	54.9	65.0	68.3	68.3	—
Start	1.9	1.2	0.7	0.3	0.1	0.1	—
Borden							
Instant Breakfast	13.0	13.1	11.1	10.0	7.5	6.0	(20.0)
Private labels							
& others	16.1	11.1	11.7	9.7	12.5	14.2	13.6
Total volume	**93.0**	**82.0**	**78.4**	**85.0**	**88.4**	**88.6**	**0.2**
Total sales							
($ millions)	**$92.6**	**$106.2**	**$98.0**	**$106.8**	**$111.7**	**$119.0**	**6.5**

Source: Lehman Brothers Kuhn Loeb Research

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40 cents a pound) the product (which sells for 89 cents a pound) would be competitively priced. The crystalline HFCS is 1.7 times sweeter than sucrose.

Kothari explains that his firm has made laboratory samples using existing powder brands and replacing the sucrose with one-half the amount of crystalline HFCS. Used at that level the ingredient costs are just about equal.

He told **Beverage Industry** that in HFCS-sweetened drinks the fruit flavor of the powdered drinks were much more pronounced. Sucrose, he said, masks the flavors.

Current users include some protein powders and Kroger Co., which is offering a private label using the Hoffman LaRoche crystalline.

Institutional food service sales of concentrated drink mixes*

	1976	1977	1978	1979E	Change 1978/79	1979 Pct. of powdered market	1979 Pct. of total market
General Foods							
Twist	5.2	5.4	5.7	5.4	(1.8)%	11.7%	3.4%
Amstar							
Dominade	3.6	4.1	4.6	3.2	(30.4)	6.7	2.0
Nestle							
Keen	2.9	2.9	3.4	3.4	(29.4)	5.0	1.5
Standard Brands							
Royal	3.1	3.1	3.1	3.2	3.2	6.7	2.0
Borden							
Wyler's	2.0	2.2	2.3	2.3	—	4.8	1.4
Cramore							
Dri-Syrups	0.8	0.8	0.8	0.9	12.5	1.9	0.6
Crystals	0.4	0.4	0.4	0.5	25.0	1.0	0.3
Total	1.2	1.2	1.2	1.4	16.7	2.9	0.9
Private labels							
& others	22.4	25.9	28.1	29.9	6.4	62.2	18.4
Total							
powdered volume	40.0	44.8	48.4	48.0	(0.8)	100.0%	29.6
Syrups	100.0	110.0	115.5	114.3	(1.0)	—	70.4
Total volume	**140.0**	**154.8**	**163.9**	**162.3**	**(1.0)**	**—**	**100.0%**
Total sales ($ mil.)	**$105**	**$111**	**$116**	**$119**	**2.6 %**	**—**	**—**

* Source: Lehman Brothers Kuhn Loeb Research estimates

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Alternative sweeteners: many wait in wings

(Editor's note: the following is taken from a report prepared by the Calorie Control Council in Atlanta. The council is an association of manufacturers and suppliers of dietary foods and beverages.)

During the 1960's, as a result of the emerging demand for low-calorie products, both saccharin and cyclamate gained widespread popularity in a variety of foods and beverages. However, in 1969, the Food and Drug Administration banned cyclamate, an action that is still under re-examination, and by 1970 saccharin was the only non-caloric sweetener available in the United States.

Since the FDA action on cyclamate a decade ago, there has been increased public interest in assuring the availability of an alternative sweetner to sugar (sucrose) for those who either require or choose to use one. In 1977, when the FDA proposed to ban saccharin, this public interest manifested itself in the form of hundreds of thousands of letters to Congress and the Food and Drug Administration protesting the elimination of saccharin, the last available non-caloric sweetener.

The development of new, safe alternative sweeteners is a complex, time-consuming process. The experts know so little about the mechanisms of taste, and the chemical structures of known sweetening agents are so diverse that it is almost impossible to predict that a chemical structure will produce sweetness. Further, the technical and safety testing of a new low-calorie alternative sweetener can cost millions of dollars, and the resulting data must be subjected to years of regulatory scrutiny before it is ready for commercial production.

It is possible that two essentially non-caloric sweeteners (cyclamate and aspartame), in addition to saccharin, may be available in the U.S. in the short term. However, their availability is presently being delayed by federal regulatory activity. The case for cyclamate was remanded to the FDA's Administrative Law Judge for a review of the data submitted to substantiate its safety and is now before the FDA Commissioner again. Aspartame is currently the subject of the first-ever, FDA-appointed Public Board of Inquiry. However, because of technical and/or supply limitations, as well as expected regulatory restrictions if approved, neither cyclamate nor aspartame can be viewed as an overall replacement for saccharin. Rather, both can be complements to saccharin, providing flexibility in the formulation of low-calorie foods and beverages.

Research is now underway on other non-caloric sweeteners. Approval, however, by FDA for use of such sweeteners in foods and beverages is several years away, at a minimum.

Although no low-calorie substitute for sugar, other than saccharin, is being used in processed food or for tabletop application in the U.S., there are a variety of caloric alternatives to sugar presently being used in dietary foods and beverages. Fructose, high-fructose corn sweetners, sorbitol and mannitol are among the approved caloric sweeteners. These sweeteners, however, contribute a significant number of calories and many are not suitable for various dietary health needs (e.g., fructose for diabetics).

Thus, in summary, it is unlikely that any additional low-calorie sweeteners will gain short-term acceptance as caloric substitutes for saccharin in dietary foods and beverages.

non-caloric and very low-calorie sweeteners

Saccharin is a non-caloric sweetner approximately 300 times sweeter than sugar (sucrose). It is derived from phthalic anhydride, a white crystalline, highly purified, organic compound. Saccharin is stable in storage, has excellent shelf life, is soluble and combines well with other sweeteners. It is suitable for a wide variety of applications, including incorporation in dry and liquid mixtures.

Saccharin has been in use for more than 80 years and has become the most widely utilized nonnutritive sweetener. Saccharin has been the object of a proposed regulatory agency ban in the United States largely because of massive doses of saccharin in two-generation experiments. The ban has been stayed by legislation pending the outcome of additional scientific research. The vast majority of saccharin research indicates no health hazard has been associated with saccharin consumption, particularly at levels used by humans.

Cyclamate is a non-caloric sweetener approximately 30 times sweeter than sugar. Cyclamate has been unavailable in the United States since 1969. Before that time, it was widely used as a tabletop sweetener and in sugar-free beverages and other low-calorie foods, particularly in combination with saccharin.

Efforts to regain approval for cyclamate have been in progress for more than ten years. In late

1978 and again in 1980, the Food and Drug Administration Administrative Law Judge recommended against reestablishing cyclamate in the food supply. His recommendation is currently under review by the FDA Commissioner. Abbott Laboratories, a manufacturer of cyclamate, also has brought suit for court approval of cyclamate.

Cyclamate is available in many countries throughout the world. Full approval of cyclamate in the United States would provide an excellent non-caloric sweetener by allowing for a cyclamate/saccharin combination as was in general use prior to 1969. Cyclamate by itself, however, would not provide a complete substitute for saccharin across a wide range of low-calorie products because of the amounts that would be allowable by regulation in foods and its relatively low sweetening power compared with saccharin.

Aspartame is an essentially non-caloric protein sweetener made from two amino acids (aspartic acid and phenylalanine.) It is approximately 200 times sweeter than sugar. Aspartame has a clean taste with slightly delayed onset and blends well with other flavors. Aspartame is suitable for a number of uses; however, it does have some technical limitations such as instability at high temperatures which precludes its use in baked goods.

Aspartame is currently approved for limited use in France, Belgium and Luxembourg. A proposal to approve aspartame for use in Canada is now under consideration by the Canadian Health Protection Branch. Other countries are also considering its approval.

Aspartame was approved in the United States in 1974 for limited use in cold breakfast cereals, chewing gum, dry beverage bases, instant coffee and tea, gelatins, puddings and fillings, dairy product analog toppings, and as a tabletop sweetener in powdered and tablet form. Marketing approval, however, was stayed when questions were raised regarding several of the toxicological evaluations of the sweetener. Although that data has now been favorably reviewed, the FDA is withholding reapproval of aspartame pending the outcome of the first-ever Public Board of Inquiry, a regulatory procedure designed to evaluate scientific evidence. The Public Board of Inquiry is expected to announce its decision, which is subject to the FDA Commissioner's review, in mid-1980. If reapproved for use, aspartame could be used in only those foods for which its use was originally petitioned in 1974, which did not include diet soft drinks. Broader usage would require additional petitions and further FDA evaluation and consideration.

A-Sulfam-K is a non-caloric sweetener derived from acetoacetic acid, a water soluble liquid which is produced in the body. It is 200 times sweeter than sugar, has no aftertaste, and is apparently unmetabolized in the body. Its sweetness is quickly perceptible and diminishes gradually without unpleasantness. It also has good shelf-life and relatively stable sweetening power across the temperature and pH ranges normally associated with foodstuffs. Its potential applications include hot and cold beverages, baked goods, milk products, veterinary feed, and cosmetic and pharmaceutical preparations. The manufacturer has petitioned the FDA for approval of its use in toothpaste and mouthwash and expects to eventually petition for its use in foods and beverages. A-Sulfam-K is not currently approved for use anywhere in the world.

Dihydrochalcones are non-nutritive sweeteners derived from the bioflavonoids of citrus products such as oranges and grapefruits. They are approximately 300 to 500 times sweeter than sugar in intensity; however, there is considerable variation in sweetening performance among the dihydrochalcones. The dihydrochalcones are characterized by delayed perception of sweetness, and a lingering licorice or menthol-like taste.

Currently, neohesperidin dihydrochalcone (Neo-DHC), synthesized from oranges, has the greatest potential for food applications. It is approximately 1,500 times sweeter than sugar, is stable, soluble in water and alcohol, suitable for dry mixtures and combines well with other sweeteners. It has potential for use in chewing gum, confections, mouthwash, toothpaste, a few fruit juices, and pharmaceuticals which are not adversely affected by its delayed onset of sweetness and lingering aftertaste. These undesirable qualities make Neo-DHC incompatible with the flavor components of many foods, for example coffee and cola bases.

Although GRAS (Generally Recognized as Safe) status for Neo-DHC was denied on the basis of inadequate toxicology testing, its potential as an alternative sweetener has prompted the National Toxicology Program (NTP) to include it among the substances to be studied. Research by the NTP is not expected to begin on this substance until 1981.

Glycyrrhizin is a non-caloric extract of licorice root. Ammoniated glycyrrhizin is the most common form of the sweetener and is 50-100 times sweeter than sugar. It is used as a flavoring for tobacco, pharmaceuticals, and some confectionery products, and as a surface active (foaming) agent in non-alcoholic beverages. Its pronounced licorice flavor, however, limits its widespread use. The FDA is considering allowing the use of ammoniated glycyrrhizin as a flavor enhancer and sweetener potentiator or synergist.

Stevioside is a non-caloric sweetener approximately 130 times sweeter than sugar. It is derived from the leaves of the Stevia rebaudiana plant. It has limited use in other countries, particularly Japan where it is used in sauces, fish products, instant juices, sugarless gum, pickles and other saline foods. Necessary long-term toxicity research and consumption data must be presented before serious consideration could be given to approval in the United States.

Among the **chloroderivatives of sucrose** are potential non-caloric (or very low-caloric) substitutes for sucrose. Manipulation of the sucrose molecule has produced derivatives that range from non-sweet or bitter to intensely sweet. The sweet derivatives range from 5 to 2,000 times sweeter than sucrose. The sweeter derivations may be potentially useful for conventional applications including use in beverages, dietetic foods and orally administered pharmaceuticals. Little is known of the specific caloric contributions of these sweeteners; however, their intense sweetening ability permits restricted additions to foods and

suggests little caloric contribution.

The trichlorogalactosucrose derivative is particularly interesting because it is 650 to 2,000 times sweeter than sucrose, and is possibly non-cariogenic. Necessary long-term toxicity research and development of an economical means of production must be accomplished before serious consideration can be given to the sweetener as a substitute for sugar in the United States. Thus, it is unlikely that this sweetener will prove a short-term discovery in the search for a safe alternative sweetener.

Monellin is a low-calorie protein sweetener approximately 1,500 to 2,000 times sweeter than sugar. It is produced from the West African Serendipity berry (Dioscoreophyllum cumminsii). Its intense sweetness allows using minimal amounts, thereby considerably reducing any caloric contribution. Monellin is water soluble, possibly non-cariogenic and will modify the flavor of some sour substances. In addition, its sweetness will be persistent in some of the substances, lingering for some time after ingestion.

Monellin has serious stability problems, especially in solution and at extremes of pH and temperature. The Serendipity berry is rare, easily perishable, and expensive to transport; therefore, it is unlikely that Monellin will become a suitable commercial sweetener in the United States. In addition, its approval in the U.S. would require extensive toxicological testing.

Thaumatin is a low-calorie, virtually no-calorie protein sweetener, approximately 2,000 to 3,000 times sweeter than sucrose. It comes from the West African Katemfe fruit (Thaumatococcus danielli). Its intense sweetness is delayed but is of long duration and leaves a licorice-like aftertaste. It also masks the unpleasant flavors of some other substances including the bitterness some individuals associate with saccharin. Thaumatin is stable in dry form, but stable in solutions such as soft drinks only when preservatives also are added.

Potential applications for thaumatin include its use as a flavor extender for toothpaste, mouthwash, or other pharmaceutical or cosmetic applications where prolonged flavor is desirable. Thaumatin also may be useful in beverages and in desserts when it is accompanied by a quick onset sweetener. It is not suitable for

HFCS industry capacity and utilization

(Mil. lbs. dry basis)

	1974	1975	1976	1977	1978	1979	1980E
HFCS Capacity	800	1,126	2,008	3,900	4,820	5,676	6,959
Change	—	40.8%	78.3%	94.2%	23.6%	17.8%	22.6%
Shipments	592	1,043	1,532	1,981	2,500	3,500	*
Change	—	76.2%	46.9%	29.3%	26.2%	40.0%	*
Capacity Utilization	74.0%	92.6%	76.3%	50.8%	51.9%	61.7%	*

*Due to increased demand for HFCS, we expect shipments to be virtually equal to capacity for 1980 and future years.
Lehman Brothers Kuhn Loeb research estimates

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March 14, 1980

HFCS capacity of U.S. producers, 1974-80

(Mil. lbs. dry and liquid basis)

	1974		1975		1976		1977		1978		1979		1980E	
42% HFCS	**Dry**	**Liquid**	**Dry**	**Liquid**	**Dry**	**Liquid**	**Dry**	**Liquid**	**Dry**	**Liquid**	**Dry**	**Liquid**	**Dry**	**Liquid**
Staley	400	560	540	750	675	950	1,135	1,599	1,025	1,444	725	1,021	1,200	1,680
Standard Brands	400	560	500	700	600	845	700	986	700	986	670	817	670	817
Amstar	—	—	50	70	50	70	300	420	300	420	300	420	300	420
ADM	—	—	36	50	583	730	950	1,338	940	1,324	1,300	1,831	1,300	1,831
CPC #	—	—	—	—	150	210	150	210	150	210	375	525	375	525
Heinz (Hubinger)	—	—	—	—	—	—	—	—	355	500	390	550	300	420
Cargill-Miles Labs	—	—	—	—	—	—	280	394	300	423	264	371	264	371
Amalgamated Sugar-American Maize	—	—	—	—	—	—	250	350	250	352	250	350	250	350
Holly Sugar	—	—	—	—	—	—	—	—	—	—	100	141	100	141
Total	**800**	**1,120**	**1,126**	**1,570**	**2,008**	**2,805**	**3,740**	**5,262**	**4,020**	**5,659**	**4,374**	**6,026**	**4,759**	**6,555**
55% HFCS														
Staley							140	197	250	352	410	535	1,200	1,680
ADM							20	28	500	704	550	714	550	714
Standard Brands							—	—	50	70	300	366	300	366
Heinz (Hubinger)							—	—	—	—	42	60	150	195
Total							**160**	**225**	**800**	**1,126**	**1,302**	**1,675**	**2,200**	**2,955**
Grand Total	**800**	**1,120**	**1,126**	**1,570**	**2,008**	**2,805**	**3,900**	**5,487**	**4,820**	**6,785**	**5,676**	**7,701**	**6,959**	**9,510**

#Does not include Canadian plant potential of 300 million pounds, dry basis.
Lehman Brothers Kuhn Loeb estimates.

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baked or broiled foods. Thaumatin is easily extracted and transported. Thaumatin has recently been approved for food use in Japan. The developers of the sweetener, Tate, Lyle, Ltd., plan to conduct chronic multigeneration toxicity testing with Thaumatin in order to meet FDA testing requirements before the sweetener may be considered for approval for food and beverage use in the United States.

reduced calorie sweeteners

Fructose is the sweetest and most soluble of the natural sugars (e.g., sucrose, glucose and lactose), and has the same caloric value as sucrose. Its relative sweetness to sugar (1.7 times as sweet as sucrose), possible non-cariogenic properties, solubility and synergistic sweetness effect with other sweeteners make it a useful commercial sweetener. Fructose may be used for cakes and other baked goods, frozen foods, desserts and dessert mixes, dry mixes, beverages and tabletop sweeteners.

Fructose is found in most fruits, but present technology uses invert sugar syrup as the basic source for production of commercial fructose. The high cost of pure fructose production, high humectancy (moisture retention) and caloric contribution limit its use.

High-fructose corn sweeteners (HFCS) are a combination of corn sugar and fructose. Of the two most common formulations, 55% and 90%, the 90% formulation has the greatest potential for applications in dietary products. Because of its high fructose content and higher perceived sweetness than sucrose, a reduced quantity may be used, therefore contributing fewer calories to the final product. HFCS have higher perceived sweetness, high fermentability, high humectancy, low viscosity, good solubility and have a clean non-masking taste. Their low viscosity and reduced tendency to crystallize make products formulated with HFCS easier to store, ship and blend. They are used for beverages, salad dressings, pickles, frozen specialities, canned fruits, tabletop syrups and desserts. Although they aid in the moisture retention of baked goods, they do not provide the texture, consistency and color that will encourage their widespread use in baked goods.

caloric sweeteners

Sorbitol is the most widely used sugar alcohol or polyalcohol. It is between 0.54 and 0.7 times as sweet as sugar and has the same caloric value. Although only about half as sweet as sugar, it has a cool, clean taste, possible insulin-sparing effects, possible non-cariogenic properties and is slowly absorbed by the body. Sorbitol is found in a variety of commonly consumed foods, particularly fruits and can be readily produced by glucose hydrogenation within the body. As is the case with other natural sugars, sorbitol provides four calories per gram ingested.

Its present applications include use in chewing gum, chocolate, toothpaste, candies and candy coatings. It has a laxative effect when consumed in excessive amounts. The FDA requires that the following warning label be affixed to any food which might cause consumption of sorbitol to exceed 50g/day: "Excessive consumption may have a laxative effect."

Mannitol, another polyalcohol, has a relative sweetness to sucrose of 0.7. Although found in few common food sources, it is mostly commonly obtained as a by-product in the hydrogenation of invert sugar syrup. Its lack of hygroscopicity (i.e., its tendency not to lump) make it a favorable bulking agent in powdered foods, and dusting agents for chewing gum. Mannitol apparently has little or no cariogenic effect, which has encouraged its use in chewing gum. Like sorbitol, it has a laxative effect when excessively consumed, and must display the same warning label when consumption is likely to exceed 20g/day. Although mannitol is slowly absorbed by the body and probably non-cariogenic, its high cost and relatively poor toleration by humans continue to limit its use. Mannitol has the same caloric value as sucrose.

Xylitol is a polyalcohol sweetner with approxlimately the same perceived sweetness and caloric value as sugar. Sources for xylitol include fruits and vegetables such as lettuce, carrots, and strawberries and cellulose waste products (e.g., wood, straw and seed hulls). Xylitol is also formed in the body as an intermediate during carbohydrate metabolism. It is absorbed in the body more slowly than sucrose.

Xylitol has good solubility, is stable in crystalline form and in solution, and blends well with other foods. Its lower melting point relative to sucrose is an advantage in the manufacture of confectionery products. Until questions surfaced regarding its potential toxicity, xylitol was used in chewing gum because of its non-cariogenic (possibly anti-cariogenic) properties and its cool taste.

taste modification

Miraculin is a flavor modifier derived from the West African Miracle Fruit (Synsepauium dulcificum). Although not a sweetener itself, it has the ability to alter the sour flavor of other substances by making them appear sweet tasting. The taste-modifying effect may be elicited by chewing a candy-like drop of miraculin prior to eating or by using substances containing miraculin such as mouthwashes. This sweet taste often lasts for 1-2 hours following ingestion. Miracle fruit is difficult to grow in the United States. In addition, the fruit must be quickly frozen or processed after harvesting or it loses its taste-modifying ability.

Miraculin is difficult to extract and its persistent sweetness, which unfortunately modifies beverages intended to be acidic or sour, make it an unlikely candidate for widespread use as a sweetening agent.